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BOMBAY BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

TOWN HALL, BOMBAY.

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GOLD AND SILVER COMMISSION.

FIRST REPORT

OF THE

ROYAL COMMISSION

APPOINTED TO INQUIRE INTO THE

RECENT CHANGES IN THE RELATIVE VALUES OF THE PRECIOUS METALS;

WITH MINUTES OF EVIDENCE AND APPENDICES.

108928

Presented to both Houses of Parliament by Command of Her Majesty.

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ROYAL COMMISSIONS.

I.

VICTORIA R.

Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith.

To Our right trusty and well-beloved Councillor Arthur James Balfour, Our Secretary for Scotland; Our right trusty and well-beloved Councillor Joseph Chamberlain; Our trusty and well-beloved Charles William Fremantle, Esquire, Companion of Our Most Honourable Order of the Bath (commonly called the Honourable Charles William Fremantle); Our trusty and well-beloved Sir John Lubbock, Baronet; Our trusty and well-beloved Sir Thomas Henry Farrer, Baronet; Our trusty and well-beloved James Richard Bullen Smith, Esquire, Companion of Our Most Exalted Order of the Star of India; Our trusty and well-beloved David Miller Barbour, Esquire; Our trusty and well-beloved John William Birch, Esquire; Our trusty and well-beloved Lionel Louis Cohen, Esquire; Our trusty and well-beloved Leonard Henry Courtney, Esquire; and Our trusty and well-beloved William Henry Houldsworth, Esquire, greeting.

Whereas it has been represented unto Us that it is expedient that a Commission should forthwith issue to inquire into the recent changes in the relative values of the precious metals shown by the decrease in the gold price of silver.

Now know ye, that We, reposing great trust and confidence in your knowledge and ability, do by these Presents authorise and appoint you the said Arthur James Balfour; Joseph Chamberlain; Charles William Fremantle (commonly called the Honourable Charles William Fremantle); Sir John Lubbock; Sir Thomas Henry Farrer; James Richard Bullen Smith; David Miller Barbour; John William Birch; Lionel Louis Cohen; Leonard Henry Courtney; and William Henry Houldsworth to be Our Commissioners for the purposes of the said inquiry.

And We do hereby enjoin you, or any five or more of you, to investigate the causes of the said recent changes in the relative values of the precious metals, and especially to inquire whether the said changes are due—

(1.) To the depreciation of silver; or

(2.) To the appreciation of gold; or

(3.) To both these causes.

If you should find the said changes to be due to the depreciation of silver, you will then inquire whether such depreciation arises from increase of supply or diminution of demand, or from both, and you will endeavour to ascertain the proportions in which these different causes have operated.

If you should find the changes to be due to the appreciation of gold, you will inquire whether the appreciation arises from the diminution of supply or from increase of demand, or from both, and you will endeavour to ascertain the proportions in which these different causes have operated.

Having regard to these different causes and their respective effects, you will next inquire what has been the bearing of the changes in the value of the precious metals on the following matters of practical business:—

I. *India:*

(*a.*) Upon the remittances of the Government of India:

(1.) For payments on old or fixed contracts.

(2.) For payments on new or current contracts.

(*b.*) Upon the persons in India who have to make remittances home in gold.

(*c.*) Upon the producers, merchants, and taxpayers of India.

(*d.*) Upon merchants and manufacturers at home who trade with India.

II. *The United Kingdom:*

(*a.*) Upon the trade of the United Kingdom with other silver-using countries.

(*b.*) Upon the foreign trade of the United Kingdom generally.

(*c.*) Upon the internal trade and industry of the United Kingdom.

If you should come to the conclusion that the aforesaid changes in the values of the precious metals are causing permanent or important evils or inconveniences to any of the interests above referred to, it will be your duty then to inquire whether it is possible to suggest any remedies within the power of the Legislature or the Government, by itself or in concert with other Powers, which would be effectual in removing or palliating the evils or inconveniences thus caused without injustice to other interests, and without causing other evils or inconveniences equally great.

Lastly, if you are of opinion that this is possible, you will state the precise form which such remedies should take, and the manner in which they should be applied.

And for the better effecting the purposes of this Our Commission, We do by these Presents give and grant unto you, or any five or more of you, full power to call before you such persons as you shall judge likely to afford you any information upon the subject of this Our Commission; and also to call for, have access to, and examine all such books, documents, registers, and records as may afford you the fullest information on the subject; and to inquire of and concerning the premises by all other lawful ways and means whatsoever.

And We do further by these Presents authorise and empower you, or any five or more of you, to visit and personally inspect such places in Our United Kingdom as you may deem expedient for the more effectual carrying out of the purposes aforesaid.

And We do by these Presents will and ordain that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any five or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment.

And We do further ordain that you, or any five or more of you, have liberty to report your proceedings under this Our Commission from time to time, if you shall judge it expedient so to do.

And Our further will and pleasure is that you do, with as little delay as possible, report to Us, under your hands and seals, or under the hands and seals of any five or more of you, your opinion upon the several matters herein submitted for your consideration.

And for the purpose of aiding you in such matters, We hereby appoint Our trusty and well-beloved George Herbert Murray, Esquire, to be Secretary to this Our Commission.

Given at Our Court at St. James's, the Twentieth day of September one thousand eight hundred and eighty-six, in the Fiftieth year of Our Reign.

By Her Majesty's Command.

HENRY MATTHEWS.

II.

VICTORIA R.

Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith.

To Our right trusty and well-beloved Councillor Farrer, Baron Herschell; Our right trusty and well-beloved Councillor Joseph Chamberlain; Our right trusty and well-beloved Councillor Sir Louis Mallet, Knight, Companion of Our Most Honourable Order of the Bath; Our right trusty and well-beloved Councillor Arthur James Balfour; Our right trusty and well-beloved Councillor Henry Chaplin; Our trusty and well-beloved Charles William Fremantle, Esquire (commonly called the Honourable Charles William Fremantle), Companion of Our Most Honourable Order of the Bath; Our trusty and well-beloved Sir John Lubbock, Baronet; Our trusty and well-beloved Sir Thomas Henry Farrer, Baronet; Our trusty and well-beloved David Miller Barbour, Esquire, Companion of Our Most Exalted Order of the Star of India; Our trusty and well-beloved John William Birch, Esquire; Our trusty and well-beloved Lionel Louis Cohen, Esquire; Our trusty and well-beloved Leonard Henry Courtney, Esquire; and Our trusty and well-beloved William Henry Houldsworth, Esquire, greeting.

Whereas We did, by Warrant under Our Royal Sign Manual, bearing date the twentieth day of September one thousand eight hundred and eighty-six, authorise and appoint Our right trusty and well-beloved Councillor Arthur James Balfour, Our then Secretary for Scotland, together with the several gentlemen therein mentioned, or any five or more of them, to be Our Commissioners to inquire into the recent changes in the relative values of the precious metals shown by the decrease in the gold price of silver.

Now know ye, that We have revoked and determined, and do by these presents revoke and determine, the said Warrant, and every matter and thing therein contained.

And whereas We have deemed it expedient that a new Commission should issue for the purposes specified in such Warrant of the twentieth day of September one thousand eight hundred and eighty-six.

Further know ye, that We, reposing great trust and confidence in your ability and discretion, have appointed, and do by these Presents nominate, constitute, and appoint, you the said Farrer, Baron Herschell; Joseph Chamberlain; Sir Louis Mallet; Arthur James Balfour; Henry Chaplin; Charles William Fremantle (commonly called the Honourable Charles William Fremantle); Sir John Lubbock; Sir Thomas Henry Farrer; David Miller Barbour; John William Birch; Lionel Louis Cohen; Leonard Henry Courtney; and William Henry Houldsworth to be Our Commissioners for the purposes of the said inquiry.

And We do hereby enjoin you, or any five or more of you, to investigate the causes of the said recent changes in the relative values of the precious metals, and especially to inquire whether the said changes are due—

(1.) To the depreciation of silver; or

(2.) To the appreciation of gold; or

(3.) To both these causes.

If you should find the said changes to be due to the depreciation of silver, you will then inquire whether such depreciation arises from increase of supply or diminution of demand, or from both, and you will endeavour to ascertain the proportions in which these different causes have operated.

If you should find the changes to be due to the appreciation of gold, you will inquire whether the appreciation arises from the diminution of supply or from increase of demand, or from both, and you will endeavour to ascertain the proportions in which these different causes have operated.

Having regard to these different causes and their respective effects, you will next inquire what has been the bearing of the changes in the value of the precious metals on the following matters of practical business:—

I. *India:*

(*a.*) Upon the remittances of the Government of India:

(1.) For payments on old or fixed contracts.

(2.) For payments on new or current contracts.

(*b.*) Upon the persons in India who have to make remittances home in gold.

(*c.*) Upon the producers, merchants, and taxpayers of India.

(*d.*) Upon merchants and manufacturers at home who trade with India.

II. *The United Kingdom:*

(*a.*) Upon the trade of the United Kingdom with other silver-using countries.

(*b.*) Upon the foreign trade of the United Kingdom generally.

(*c.*) Upon the internal trade and industry of the United Kingdom.

If you should come to the conclusion that the aforesaid changes in the values of the precious metals are causing permanent or important evils or inconveniences to any of the interests above referred to, it will be your duty then to inquire whether it is possible to suggest any remedies within the power of the Legislature or the Government, by itself or in concert with other Powers, which would be effectual in removing or palliating the evils or inconveniences thus caused without injustice to other interests, and without causing other evils or inconveniences equally great.

Lastly, if you are of opinion that this is possible, you will state the precise form which such remedies should take, and the manner in which they should be applied.

And for the better effecting the purposes of this Our Commission, We do by these Presents give and grant unto you, or any five or more of you, full power to call before you such persons as you shall judge likely to afford you any information upon the subject of this Our Commission; and also to call for, have access to, and examine all such books, documents, registers, and records as may afford you the fullest information on the subject; and to inquire of and concerning the premises by all other lawful ways and means whatsoever.

And We do further by these Presents authorise and empower you, or any five or more of you, to visit and personally inspect such places in Our United Kingdom as you may deem expedient for the more effectual carrying out of the purposes aforesaid.

And We do by these Presents will and ordain that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any five or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment.

And We do further ordain that you, or any five or more of you, have liberty to report your proceedings under this Our Commission from time to time, if you shall judge it expedient so to do.

And Our further will and pleasure is that you do, with as little delay as possible, report to Us, under your hands and seals, or under the hands and seals of any five or more of you, your opinion upon the several matters herein submitted for your consideration.

And for the purpose of aiding you in such matters, We hereby appoint Our trusty and well-beloved George Herbert Murray, Esquire, to be Secretary to this Our Commission.

Given at Our Court at St. James's, the Sixth day of May one thousand eight hundred and eighty-seven, in the Fiftieth year of Our Reign.

By Her Majesty's Command.

HENRY MATTHEWS.

GOLD AND SILVER COMMISSION.

FIRST REPORT.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

WE, the undersigned Commissioners appointed to inquire into the recent changes in the relative values of the precious metals, desire humbly to submit to Your Majesty the following Report of the steps which have been taken up to the present date to prosecute the inquiry entrusted to us.

Twenty-four meetings have been held, and twenty witnesses have been examined, notes of whose evidence, with other information relating thereto, are appended.

Following the line of inquiry indicated in the terms of our reference, the investigation was commenced by obtaining such information as was available with regard to the supply of, and the demand for, the precious metals.

The Commission then proceeded to consider how far the conclusions which might be drawn from these statistics were supported by other indirect evidence, such as the prices of commodities.

These two branches of the inquiry occupy the first seven days of the accompanying notes of evidence.

Representations were next invited from those whose interests were said to have been adversely affected by the recent changes in the relative values of the precious metals, or who desired to suggest remedies for the evils alleged to exist.

Their evidence falls under the following heads:—

(*a.*) The position of the Government and people of India;
(*b.*) The interests of merchants trading with India, China, and other silver-using countries;
(*c.*) The effect upon the general trade and industry of the United Kingdom; and
(*d.*) The remedies which have been proposed.

We have not completed our inquiry into any of the matters specified above; and it will be observed that a large portion of the evidence already taken represents opinion on one side only of the questions at issue.

This is more particularly the case with regard to those witnesses who have appeared before us to suggest remedies.

We shall endeavour at an early date to obtain the evidence of competent witnesses who take an opposite view; and we may find it necessary to take further evidence on some or all of the points above mentioned. But we have, nevertheless, thought it desirable to submit this preliminary report of our proceedings so far as we have been able to carry them at present.

All which we humbly submit for Your Majesty's gracious consideration.

(Signed) HERSCHELL.
J. CHAMBERLAIN.
LOUIS MALLET.
ARTHUR JAMES BALFOUR.
HENRY CHAPLIN.
C. W. FREMANTLE.
JOHN LUBBOCK.
D. BARBOUR.
J. W. BIRCH.
LIONEL L. COHEN.
LEONARD COURTNEY.
W. H. HOULDSWORTH.
T. H. FARRER.

GEO. H. MURRAY,
Secretary.

10th June 1887.

LIST OF WITNESSES.

Date.		Name.	Page.
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„	„	Sir Hector Hay - -	13
„	26	Mr. R. Giffen - -	19
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„	8	Mr. A. Sauerbeck -	47
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1887.			
February	1	Mr. S. Montagu, M.P. -	71
„	4	Mr. H. Waterfield, C.B.	77
„	8	Mr. J. K. Bythell -	92
„	11	Mr. J. Talboys Wheeler	108
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1887.			
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Mr. Robert Barclay - - -	110	Mr. R. H. Inglis Palgrave, F.R.S. -	1
Mr. J. W. Birch - - - -	67	Mr. S. Pixley - - - -	8
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Mr. D. McLean - - - -	257	Mr. J. Talboys Wheeler - - -	108

MINUTES OF EVIDENCE

TAKEN BEFORE THE

ROYAL COMMISSION

ON

GOLD AND SILVER.

At 8, Richmond Terrace, Whitehall, London, S.W.

Friday, November 19th, 1886.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. LIONEL L. COHEN, M.P.
SIR T. H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
MR. J. R. BULLEN SMITH, C.S.I.

MR. GEO. H. MURRAY, *Secretary.*

Mr. R. H. INGLIS PALGRAVE, F.R.S., examined.

1. (*Chairman.*) The Commission propose to ask you some questions with regard to that part of the memorandum which you laid before the Commission on Trade which relates to the supply of the precious metals. Could you inform us of the circumstances under which you prepared the memorandum, and more especially that portion of the memorandum?—The memorandum was prepared at the request of a sub-committee of the Commission on Depression of Trade which was appointed to consider the currency question. They recommended to the Commission that I should prepare this memorandum, and it was formally accepted and endorsed by the Commission and by Lord Iddesleigh, the Chairman of it.

2. Could you tell us the steps you took to prepare it?—A considerable part of the information contained in it is derived from a recent work by Dr. Soetbeer. I received a great deal of assistance from Mr. Fremantle and others for the portion which refers to England; from the India Office; from M. Leon Say and M. de Foville for the portion referring to France. The names of those from whom the information is derived are mentioned in the memorandum.

3. Then perhaps you could explain more particularly to the Commission the ground which it is intended to cover, and the lines of inquiry which in your opinion it opens out?—It was intended to be a ground work to show the lines upon which such an inquiry should be founded. It was not intended to be a complete inquiry in itself, but simply to point out the lines upon which the inquiry should be made.

4. Then could you tell us to what lines of inquiry you think it specially points for further investigation?—Particularly as to the effect on prices of the alteration in the use of the gold standard throughout Europe and in America. I think that is the next point for inquiry.

5. You mean that having determined the supply of the precious metals, the next point we shall have to determine will be the effect on prices?—The first point I considered I had to determine was whether there had been a drop in prices or not, and for that purpose I arranged various index numbers. Those index numbers showed that there had been a drop in prices both in Europe and in America. A further question is how far that drop in prices is attributable to the alteration in the use of the gold standard, and how far it is referable to other causes. In my opinion it is only a comparatively small part of the drop in prices which is attributable to the appreciation of the standard.

6. Without going into the question of prices, which we thought we would defer till a later stage of our inquiry, could you explain a passage in sub-section 7, at the bottom of page 323. It would appear from that subsection 7 that after the year 1640 the amount of gold and silver in existence largely increased, but that that increase was only adequate and not more than adequate to maintain prices at their former level?—Yes. That fact is shown by the price of wheat remaining nearly uniform, on an average, throughout the 17th and 18th centuries. Your question is now, how the equilibrium came to be altered?

7. No, before getting to that, is it not an interesting fact that while the supply of the precious metals largely increased during that time, prices notwithstanding were not affected. You would consider that that is a fact proved with reference to the price of wheat more especially, but also with reference to other commodities?—I cannot speak of other commodities.

8. Would you consider the price of wheat a fairly sufficient indication of the equilibrium in prices?—Yes, I think so at that period.

Mr. R. H. Inglis Palgrave, F.R.S.

19 Nov. 1886.

9. How is the fact accounted for that in spite of the increase of precious metals, the prices did not rise?—That is partly to be accounted for, I presume, owing to the annual loss by abrasion, the export of gold and silver, chiefly silver, to India, the consumption of gold and silver in use and ornament.

10. But is it not your opinion that the head 3 mentioned in that subsection is probably the most important one to be borne in mind in explaining the fact that while the currency increased prices did not alter?—I think it was the opinion of Mr. Newmarch, who wrote the paragraph to which you refer, that at that period the consumption of the precious metals nearly balanced the production of them, which would account for the circumstance.

11. Then, in your opinion, the head 3 in that subsection was not very material in maintaining the equilibrium?—I think head 3 mainly refers to the supply of silver.

12. It does not refer to silver alone, I think?—It mainly refers to silver. The supply of gold at that time, I think, was not very large. I am now speaking from memory, but there was no rise of prices till the year 1570.

13. But I am talking of the period subsequent to 1640?—The statement is that by 1640 there had been a rise of prices of 200 per cent., and that the increase in gold and silver in that time, as compared with the stock known to be in existence when America was discovered, was about 600 per cent.

14. (*Mr. Cohen.*) You would not consider now that wheat is a sufficient indication of the equilibrium in prices?—I think the price of wheat would be, taken over a series of years, as fair an indication of the purchasing power of the standard of value in England, and also to a great extent in France, as can be obtained from observing the price of a single article. Of course, the effect of the Customs duties on prices must also be considered.

15. (*Chairman.*) Taking those two paragraphs of your memorandum together, (namely, subsections 6 and 7 at the foot of page 323), you will observe that we have the fact that the average annual supply of gold and silver was after 1640 twice as great as the average annual supply before 1640, but that, nevertheless, while before 1640 prices rose rapidly, after 1640, in spite of this increased supply, prices remained steady for upwards of a century. That is the fact that is brought out by those two paragraphs taken together, and what I want you to give to the Commission is your opinion as to the inference, if any, which may be drawn from them?—The inference which I draw from them is this, that you cannot clearly connect in an absolute proportion an increase of the stock of the precious metals with an alteration in prices. As I mentioned, the increase in gold and silver had been 600 per cent., but the rise in prices had been only 200. The whole state of commerce and of the world was so different at that period from what it is now, that I do not think that it is any use trying to gather information from what occurred then, which would be of service at the present time.

16. But as prices owing chiefly to the increase of commerce and of population, only maintained their equilibrium in the face of an enormous augmentation of the supply of metals for more than a century, is not the inference that at any other period, when commerce and population are increasing, unless the supply of precious metals undergoes great augmentation, you will have a fall in prices. I do not know if I have put that clearly, but that is an inference that might be drawn from those two paragraphs?—Yes, it might be drawn. At the same time you have to remember that the credit system and the use of book credits did not exist at that period. When I say did not exist I mean that they existed only in a very modified form at that period, and therefore the increase in the stock of the precious metals would have a totally different effect upon prices from what it would have at a time when such a system was in full operation.

17. But my question is, must not the precious metals go on rapidly increasing, judging from those instances, if you are to keep prices in equilibrium?—Yes, but then there are a great many other things that have to come into consideration, such as the rapidity of the turnover of the money used.

18. Do you think it possible that the machinery of exchange may be so far improved in the future as to make up the deficiency? Could you give a conjecture as to the possibility of making up any deficiency in the supply of precious metals from mines?—I am always averse to attempting to prophesy in such matters. I could imagine such a thing possible.

19. (*Mr. Cohen.*) One question in connexion with the export of gold to India. I should like to ask whether you are aware of any of your figures in that respect having been challenged, as to the absorption of gold in India?—I am not aware of it. They were the Indian official figures.

20. (*Mr. Birch.*) With regard to the former question, I infer that you think the period named here can bear no comparison with what is happening in the present day?—You can scarcely make any comparison; the general circumstances of trade and life are so different now from what they were then.

21. (*Chairman.*) I come now to table 5, production of the precious metals. The table you have put in here is, I think, one compiled by Dr. Soetbeer; is not that so?—Yes.

22. What other estimates of the production of the precious metals besides Dr. Soetbeer's are there?—There are a great many. There is one prepared by Sir Hector Hay. Between that and Dr. Soetbeer's there are various differences. Dr. Soetbeer explains this by saying that Sir Hector Hay has under-estimated the production in South America and other countries, but as I understand the Commission will invite Sir Hector Hay to appear before them, he will doubtless explain to them upon what basis he formed his estimate.

23. Can you explain the principles on which Dr. Soetbeer and Sir Hector Hay have respectively based their estimates?—I understand Dr. Soetbeer to have availed himself of the official estimates that are found in various countries.

24. (*Mr. Cohen.*) I understood that there are no such data in any countries as to actual production; that they can only measure it by the export from those countries and the amount used in those countries?—I have no doubt that these estimates are all more or less matters of conjecture, so far as they refer to production and also to consumption, except for the mere statistics of coinage, and not more than that.

25. (*Chairman.*) But estimates may be a matter of conjecture and yet the limit of error may be comparatively so slight that conclusions may be legitimately founded upon the estimates. Can you tell us whether you think that Dr. Soetbeer's estimates are of that kind?—I think Dr. Soetbeer's estimates of the production of the precious metals and of the use of the precious metals for coinage purposes may be depended on as far as such estimates can be. His estimate of the gold available for the supply of coinage has appeared to me to rest more on a conjectural basis than the estimates of the quantities produced and employed for coinage. Take Dr. Soetbeer's estimate of the supply available for coinage during recent quinquennial periods. He estimates the supply for the years from 1851 to 1860 to be 22,780,000*l.*; that is annually From 1861 to 1870, 14,060,000*l.*; from 1871 to 1880, 10,255,000*l.*; from 1881 to 1884, 4,050,000*l.* These are the annual averages of the available supply given by Dr. Soetbeer when the weight of gold which he mentions is reduced into sterling value. Considering that those figures were very small, I applied to Mr. Stewart Pixley, who furnished me with an estimate which, when it is reduced to the same form for quinquennial periods, which in Mr. Pixley's case run from the year 1852 onwards, gives for the first period, 1852 to 1860, 27,600,000*l.*; for the second, 1861 to 1870, 17,600,000*l.*; for the third, 1871 to 1880, 18,700,000*l.* and for the last, 1881 to 1885, 11,200,000*l.*

26. Has Mr. Pixley followed a different method of investigation from that adopted by Dr. Soetbeer?—As far as I understand Mr. Pixley he followed an identical method; I mean, he had allowed for the same causes.

27. Does Mr. Pixley give any explanation of the difference of the conclusion which he has arrived at from that arrived at by Dr. Soetbeer?—No, I have not obtained any explanation from him.

28. So that we have no means of determining or conjecturing which is the most trustworthy investigation?—Well, my own opinion is that Mr. Pixley's is more likely to be nearer the truth.

29. Perhaps you will put in Mr. Pixley's?—I will put in both the figures and an estimate of production and the exports to India in the same form.

Estimate of Production of Gold, Dr. Soetbeer. Yearly average.

Years.	£
1851–60	28,650,000
1861–70	26,600,000
1871–80	23,000,000
1881–84	19,500,000

Exports to India. Yearly average.

Years.	£
1851–60	2,140,000
1861–70	5,900,000
1871–80	1,470,000
1881–84	4,700,000

Gold available for the supply of Coin. Estimates of yearly average, Dr. Soetbeer.

Years.	£
1857–60	22,780,000
1861–70	14,060,000
1871–80	10,255,000
1881–84	4,050,000

Gold available for the supply of Coin. Estimates of yearly average, Mr. Stewart Pixley.

Years.	£
1852–60	27,600,000
1861–70	17,600,000
1871–80	18,700,000
1881–85	11,200,000

30. (*Chairman.*) Have you any general conclusions other than those contained in your memorandum which you draw from the information available with regard to the production of the two metals?—I do not think there is anything further. The production of gold has distinctively been less, and of silver it has been more.

31. Then what interpretation do you place upon the fact which I think is brought out upon page 326, that while the stock of silver is less than it was in 1850, the price is lower, the consumption is in excess of the recorded supply, and the production greater?—I suppose by consumption you mean the use for coinage.

32. The use for coinage; but that of course makes the fact even more remarkable, because there are other modes of consumption?—This statement of mine compares the coinage as against the production without making any deduction for use in arts and manufactures.

33. But if you made an allowance for use in arts and manufactures the excess of consumption over supply would be even greater than it is?—No question.

34. Then the fact remains as remarkable, or even more remarkable than as stated by you in your memorandum?—After receiving those two estimates of Mr. Pixley and Dr. Soetbeer, I thought I might leave the use of the precious metals for arts and manufactures out of account, the basis being clearly so difficult to obtain in a true form. The interpretation I place upon the matter is this, that the reduction in the price of silver in London is mainly owing to the action of Germany and the Latin Union and America so far as they have demonetized silver.

35. Through the familiar fact that certain countries which formerly used silver, now use gold, or use gold more than they used to?—They ceased to use silver, or altered their use of it.

36. How do you account for the fact that the stock of silver in existence appears to be less than in 1850?—That is another table, in which the flow to the East is allowed for, the wear and tear, and also the consumption in arts and manufactures.

37. Perhaps you would tell us whether any estimate can be made of the re-mintage of worn coin. The very paradoxical fact that the production of silver is far short of the coinage of silver is accounted for, you state, on page 327 chiefly by the effects of re-mintage. Is it in your power to give us any details of re-mintage?—A great deal of the information I received on that point was supplied me by Mr. Fremantle, who was so good as to give me a good deal of information which is embodied in my memorandum. That refers particularly to the coinage at the English mints, and I understand from another source that between 1871 and 1880 there was about 42,000,000 of gold coined at our mints, of which over 10,000,000 was in United States gold coin melted down and re-minted here. That is one fourth, if that statement is correct.

38. So that one fourth of the whole coinage in England is re-coinage of American gold?—That is the statement I have received for the period referred to. Wishing to push the inquiry further, I asked Professor Roberts-Austen, who is the chemist to the Mint, and he informed me that "The analysis of "a melted mass of gold would certainly enable a "metallurgist to say whether it was probably melted "native gold, refined gold, or coin. Ingots, how-"ever, in the English market, are, I should say, "almost always refined gold, except in cases in which "the standard of the mass would at once indicate that "they were from melted coin." I think that by inquiry at the Mint you will be able to get more information upon that point.

39. But you would regard it as vital to our inquiry, as to the relation between the demand for precious metals in the form of coin and the supply from the mines, to discover how much of the actual coinage is re-coinage?—No question. I endeavoured to ascertain that, but in a very imperfect manner.

40. Supposing we are able to form some tolerably accurate estimate of the amount of re-coinage in the United Kingdom, could we take that as giving us any guide to the amount of re-coinage in the other mints of the world?—I should not think so at all; the proportion might be very different in other countries.

41. So that a similar investigation would have to take place in every other country, in order to form a reliable estimate?—If you were to address inquiries to the French, German, and American Mints, you would get a great many facts that would be of much service to your enquiry. Mr. Fremantle was so good as to supply me with some valuable information respecting the American Mint, which I employed at page 318 of my memorandum.

42. But you have no information yourself, either from the Indian Mint or from any other mint, which will supplement the information given in this memorandum?—I have no figures, except those with which the India Office supplied me, but I know that a great part of their coinage has been re-coinage, at least I have been told so at the India Office.

43. The same general principles of investigation will apply to the silver currency as to the gold, I suppose?—I think so.

44. In England the question of re-coinage of silver is of less importance, owing to the fact that it is a

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token coinage?—Yes, but I believe that a great deal of the coinage of silver also is a re-coinage in England.

45. In spite of the fact that it is a token coinage?—Yes, I believe so.

46. But while in England the matter of the re-coinage of silver is comparatively unimportant, it is of the greatest importance in countries where silver coinage is legal tender to any amount, or where silver is the sole coinage in common use?—Silver is legal tender to any amount in the United States of America, except where stipulated otherwise in the contract, though not standard of value.

47. In America is there much re-coinage of silver?—The re-coinage in India and of the Mexican dollars no doubt is very large indeed, and I think, especially in the case of the latter, it is almost impossible to ascertain how far it extends.

48. What amount of reliance do you think can be placed on the estimates of the stocks given in Table 6?—I think they must be used with very great caution.

49. You mean that the data on which they are founded are so conjectural?—They are so much the personal opinion of the individual who has prepared them.

50. Do you know of other estimates varying largely from those which have been made by other investigators?—I gave you the instance between Mr. Pixley's and Dr. Soetbeer's.

51. But there is no other estimate that you are aware of besides Mr. Pixley's and Dr. Soetbeer's?—I was endeavouring to have one made which I may be able to lay before the Commission.

52. Have you any information with regard to the amount of coin which is, firstly, hoarded; secondly, used as current coin, and, thirdly, kept in bankers' reserves, under which three heads I presume all coin might be accounted for?—I think there is very little coin hoarded in the United Kingdom at the present time. The amount of the current gold has been estimated at about 100,000,000*l.*

53. Current gold as distinguished from bankers' reserves?—No, the gold coin in existence in the kingdom has been estimated at from about 95,000,000*l.* to 105,000,000*l.* The ordinary estimate is about, 100,000,000*l.* in the United Kingdom. With regard to the reserves of gold held by bankers, an inquiry was made about these by the bankers in the year 1883. The figures appear in the June number of the Journal of the Institute of Bankers, 1883, and are as follows:—

"THE GOLD COINAGE.

"The Coinage Committee* have made the following report, which has been adopted and approved by the Council:—

"*Report of the Coinage Committee to the Council of the Institute of Bankers.*

"Your committee have the honour to report that at a meeting held on 16th March it was agreed that it would be highly desirable to inquire what amount of gold was held by the banks of the United Kingdom collectively, with a view of ascertaining how far any action taken towards placing the gold coinage in a more satisfactory condition could be supported by the Bankers in a body. It was resolved to invite all banks to make a return of the gold coin held by them and their branches on the evening of Monday, 30th April, and, for the reasons stated below, your committee have no reason to think that this date was unsuitable for the object in view.

"In reply to circulars so sent out, answers were furnished by a considerable majority in number, and a still larger proportion in importance, of banks throughout the United Kingdom. The result is shown in the following table:—

	Returns.	No Returns.	Total sent.
London Private Banks	33	—	33
Bank of England	1	—	1
London Joint Stock Banks and Branches	16	—	16
Country Private Banks and Branches	138	22	160
Country Joint Stock Banks and Branches	87	4	91
Isle of Man Banks and Irish Private Banks	3	2	5
Scotch Banks and Branches	10	—	10
Irish Banks and Branches	9	—	9
	297	28	325
Channel Islands Banks	2	4	6
	299	32	331

"It may be remarked that among the banks from which no return was received some might fairly have been excluded from the list on the ground that though their names appear in the 'Banking Almanac,' their business was hardly that of bankers, in the usually accepted sense of the word; others retaining their name for the sake of their circulation only, or being in course of amalgamation with other banks. In the case of the Channel Islands, French rather than English gold is the usual medium of exchange.

"Your committee have to express their appreciation of the readiness with which information was furnished to them on a point as to which hitherto considerable reticence has been noticed, and consider that they have best justified the confidence which has been reposed in them by destroying all the individual returns with which they have been favoured.

"The gold held by the 299 banks from which returns were received, including the Bank of England, amounted to 22,010,008*l.* 10*s.*, which your committee have reason to believe to be a minimum amount. A considerable number of returns were accompanied by the remark that the stock of gold returned was very much below the average, and that a return made on a Thursday instead of a Monday, or made at a different time of year, would have shown a much larger total. Your committee are, however, of opinion that the object of their inquiry was to ascertain the minimum rather than the average amount of gold held by banks collectively, and they are satisfied that while the figures which they submit do not adequately show the extent to which bankers are burdened by the existing condition of the gold coinage, they do represent the extent to which bankers could co-operate in any scheme for restoring its condition.

"It may be mentioned that in one of the few instances in which hesitation was shown in making a return to your committee, the objection was based, not on the small quantity of gold held, but because the amount of dead weight held in this shape was so large.

"Making allowance for the banks rom which no return was made, it is probable that the gold coin held by banks on the 30th April last was 22,150,000*l.*, this being, as above stated, a minimum amount; making allowance for the circumstances which have been referred to, the average holding would probably be 25,000,000*l.*, made up as follows:—

	£
Bank of England	11,000,000
English banks	8,100,000
Scotch	3,100,000
Irish	2,800,000
	25,000,000

* The Committee was appointed at a meeting of the Council of the Institute held in February 1883. The course adopted by them in order to obtain the information required will be found in Vol. IV. of the Journal of the Institute of Bankers, p. 263.

"Your committee would recommend that a letter be addressed by the President, in the name of the Council, to the Lords of Her Majesty's Treasury, with a view of ascertaining whether the Government is prepared to take action, either separately or in combination with the Bankers as a body, in order to restore the condition of the gold coinage, and to maintain it in a satisfactory condition in the future.

JOS. HERBERT TRITTON, *Chairman.*
HENRY FARNCOMBE BILLINGHURST.
WILLIAM HOWARD.
JOHN LUBBOCK.
JOHN BIDDULPH MARTIN.
ROBERT HARRY INGLIS PALGRAVE.
RICHARD BLANEY WADE.

"June 6th, 1883.

"In pursuance of the recommendation contained in the foregoing report, the following letter, signed by the President, has been transmitted to the Lords of Her Majesty's Treasury :—

"Institute of Bankers,
11 & 12, Clement's Lane, E.C.,
19th June 1883.

"MY LORDS,

"ON behalf of the Council of the Institute of Bankers I beg respectfully to invite your attention to the condition of the gold coinage of the Realm, the deterioration of which has of late years increased in a marked degree, to the great inconvenience of the public in general, and to the serious anxiety of the Bankers as a body.

"I take the liberty to refer to the Report of the Royal Commission on International Coinage, 1868, who reported that 'a gradual re-coinage will soon 'become a matter of necessity under any circumstances,' and also to the Report of the Select Committee on London City Lands (Thames Embankment) Bill, 1881. Ample evidence of the depreciated condition of the gold coinage was given on each of these occasions. I may also refer to the Annual Reports of the Deputy-master of the Mint, who has more than once called attention to this matter.

"The extent of this depreciation formed the subject of an inquiry by the late Professor Stanley Jevons in 1868, and has been treated on two occasions in papers read before this Institute by Mr. John B. Martin in 1882, and by Mr. R. H. Inglis Palgrave during the present year. Consequent on the reading of the latter paper, a Coinage Committee was appointed by this Institute, which has reported the result of their inquiry into the amount of gold coin held by the Bankers of the United Kingdom as a body.

I have the honour to enclose a copy of their Report to the Council of this Institute, from which it would appear that of an estimated gold circulation of one hundred millions the banks have an aggregate minimum holding of more than one fifth, and a probable average holding of one-fourth part: of this amount, which may be roughly stated as 25,000,000*l.*, it is probable that not more than 5,000,000*l.* or at the utmost 6,000,000*l.* is in light coin.

"The rapidity with which the gold circulation changes hands and passes through the hands of the banks is shown by the fact, that whereas the total amount of gold coin minted from 1817 (when sovereigns were first coined) to 1880 inclusive was 308,000,000*l.*, there passed through the scales of the Bank of England in the twenty-one years 1860–80, 395,000,000*l.*, of which 332,000,000*l.* was paid in by the Bankers; it is therefore evident that the banks are in a position to co-operate very effectually in any measures that may be taken in regard to the gold coinage.

"I do not venture to trouble your Lordships with a detailed statement of the arguments by which this Institute supports its opinion that the restoration of the gold coinage to a satisfactory state is an end that it is beyond the power of the present Coinage Act to effect, and that the result of any attempt to enforce its provisions stringently would be that the loss would fall mainly, not on the Bankers, but on their customers, the public; while the general inconvenience to business, and to the whole population, would be almost incalculable. But I take the liberty respectfully to ask whether your Lordships are in a position to acquaint me in some measure with the intentions of your department in this matter, or whether you would be willing to receive a deputation from the Council of this Institute, and so to afford them an opportunity of laying before your Lordships some of the points which appear to them most material.

In the hope that this matter will receive the favourable consideration which its importance deserves,

"I am, my Lords,
"Your Lordships' very obedient Servant,
"RICHARD B. MARTIN,
"*President.*

The Right Hon.
"The Lords Commissioners of Her
Majesty's Treasury, Whitehall."

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The result of the inquiry was this, that at that time the Bank of England held 11,000,000*l.* in gold coin; it was estimated that the English banks held 8,100,000*l.*, the Scotch banks 3,100,000*l.*, and the Irish 2,800,000*l.* That is about 25,000,000*l.*, or one fourth of the total stock. That was an investigation made by a bankers' committee on which I served, whose report I have given in. I have reason to believe that the amount shown to be held was rather below the ordinary average, owing to the time of year and the day of the week at which the investigation was made. I think you may safely assume that about one fourth of the gold coin of the country is in the form of bankers' reserves, that is to say is, on an average, in the tills and reserves of the banks of the country.

54. (*Mr. Birch.*) What period of the year was it made in?—The 30th April 1883, which was a Monday.

55. (*Chairman.*) Have you any observations to make on the table you have put in with regard to the use of precious metals in arts and manufactures? —I am afraid I can give no further estimate. The amount is certainly very large, and it is used for purposes which you would at first sight hardly expect. I was speaking with a chemical manure manufacturer, Mr. R. Prentice, of Stowmarket, the other day, and he told me that he employed platinum stills for part of his business, and that when they required repair they were mended with gold. I cannot form any estimate of the quantity employed in different manufactures, except that the amount is certainly large; of this a great deal would be continually worked up again.

56. I suppose you would say that that table is at least as conjectural as any of the other tables you have put in?—I think so; more.

57. It depends more on the idiosyncrasy of the individual calculator?—I think so. It was the best I could find for the use of the Commission.

58. (*Mr. Barbour.*) Will you look at Table 5, page 324, where the total production of gold and silver is given, and the silver is taken at the old ratio of 15½ to 1?—Yes.

59. That of course gives an incorrect total?—At the same time it is the only method upon which you can make a statistical comparison, if you use value.

60. That may be; but if you reduced the silver to gold at the average actual ratio of the year instead of at the ratio of 1 to 15½ you would get a lower figure? —The absolute weights which correspond to that total will be found in the next page.

61. So I am aware; but if, for example, you take the quinquennial period 1876–80, the total production is 46,157,850*l.* and for 1883 it is 46,139,300*l.* That appears to be almost the same figure?—Yes.

62. But if you reduced the figure of the production of silver for 1883, to the gold standard by the average rate of the year, you would get a smaller figure?—No question.

63. And in the same way, if you employed the silver standard throughout (both for the quinquennial period 1876–80 and for 1883) you would get a larger figure?—I do not quite follow.

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64. What I mean is this: Convert the gold production into silver for 1876–80 at (say) Rs. 10 to the £?—Yes.

65. In this way you would get, roughly, 461,000,000 of rupees?—That includes the gold as well as the silver.

66. But then if you converted the figure of gold production for 1883 at the actual average rate of the year you would have to convert it at a different ratio, say 13 rupees to the 1*l.*, and you would get a larger figure. From the point of view of the silver standard the value of the production of both metals is increased. If you use the silver standard throughout, the value of the production of both metals is increased?—I think that is hardly the way that the table reads. This is an estimate of the value at 5*s.* an ounce, and it is the only method by which you can make a comparison between one year and another.

67. Well, cannot you use the one standard throughout? Could not you convert the silver to gold at the ratio of the year?—I think it would be less intelligible to most persons. I am aware that in the last edition of his statements, Dr. Soetbeer has made all these alterations according to the value of the year, but that does not appear to me so useful a method for statistical purposes.

68. It is not a question of convenience, it is a question of accuracy. I admit it may not be so convenient for some purposes, but it would be more accurate to use the true gold standard throughout, or the true silver standard?—I think for statistical purposes it is better to adhere to one standard, though the figures may be artificial to that extent. A preferable method might be to work the figures out on both values, the assumed and the actual. I have done this in Table 12 of the imports and coinage of silver in India.

69. But the value of the production of the two metals in 1883 is not 46,139,300*l.*?—That is not the value in the market, no doubt; it is the value at the estimated ratio.

70. In giving the figures of the coinage of silver I understand that you do not include the amounts coined at the mints in the Native States of India?—I was not able at the India Office to obtain them.

71. Nor could you include the coinage of Afghanistan?—I was not able to do so.

72. Silver is coined there, but the amount of the coinage is unknown?—I understood that there was a considerable coinage in those countries, but I was not able to obtain the figures of it.

73. No doubt, you have seen the report of the Select Committee of 1876 on silver, of which Mr. Goschen was Chairman?—Yes.

74. In that report it was said that it was possible, perhaps probable, that the reduced value of silver would lead to a falling off in the production?—Yes.

75. Well, the figures so far do not prove that that is the case. No figures that you have obtained show that there has been a falling off in the production of silver?—Perhaps that shows that it is undesirable to prophesy in these matters.

76. But the fact is as I have stated?—Yes.

77. And on the other hand, the increase in the relative value of gold has not led to an increase of production?—No, it does not appear to have done so, and that is a remarkable fact.

78. At p. 324 you say it would seem that the decreasing relative value of silver shown in Table 36 has tended to cause a diminished demand in India for the depreciated metal, and conversely an increased demand for gold. I should like to know the grounds for holding that there is an increased demand for gold, the appreciating metal?—I referred to the increased imports from Australia to India. Table 36 refers to the price of silver. The price of silver in London is given in that table. It is simply referred to as an indication of the altered price of silver. That is the reason for the reference to that table.

79. You are aware that the imports of gold into India some years ago were much larger than they have been in recent years?—They have fluctuated very largely, but the average was larger for the years 1881–84 considerably than for 1871 to 1880.

80. But for the period preceding that, for the period before 1871, the imports of gold were larger?—Those include, I think, the period partly of the cotton famine, and therefore that appeared to me to be an exceptional circumstance which largely influenced these.

81. It was during the period from 1871 up to 1880 that the import of gold fell off?—Yes.

82. Are you aware that during that period there was more than one severe famine?—Yes, I was aware of that, but I refer to the last few years in particular.

83. You compared the last few years with the period from 1870 to 1880, and you drew the inference that the appreciation of gold was leading to a larger import?—To an increased demand. I was informed that an increased preference for gold for hoarding purposes had been shown in India.

84. What are the grounds for that, other than the figures of the import?—I was informed that it was the case.

85. But the reasons, going beyond mere statement that it was so?—I was informed so by persons on whose authority it appeared to me that I could rely. There were various shipments of gold from Australia to England, and a portion of the cargo was discharged at Bombay.

86. But you say that there is reason to believe that of late years the people of India have shown a preference for gold over silver, and that conclusion is based on the fact that the imports of gold from 1880 to 1885 were on the average larger than they have been from 1870 to 1880?—They were four times as large nearly.

87. Considerably larger. Then I ask you, are you aware that between 1870 and 1880 there were severe famines in India?—Yes, I was aware of that.

88. That would lead to a lesser demand for gold in two ways: first, the people would have less money to invest in gold; and, secondly, in the case of a very severe famine, I suppose those who had a hoard of gold would be forced to give up a portion of it, and it would supply that part of the country where the famine did not exist. That is what you would expect?—Yes.

89. So that one cannot say with any certainty that there has been shown a greater desire to hoard gold because gold is appreciated?—I have no doubt your knowledge of India is far more complete than mine. I had to rely on the information that I received in this country.

90. (*Mr. Cohen.*) There is one point that I have ascertained while you have been under examination, and that is that we have here, at page 386 of your paper, the total amount of re-coinage of silver in India, given as 24,000,000*l.* sterling?—Yes. I think that refers to the amount of coins received, but not to the amount of bars, possibly made out of coin.

91. That is the amount of re-coinage. But does not that qualify very much your statement as to the excess of silver coined in India. You have there a column, which is deducted in Table E., of the amount of old silver re-coined in India, but in your figures here at page 326 you have not deducted that, so that will make a very important difference, as showing over a certain period the amount of excess or deficiency in the quantity of silver used for consumption?—I do not think that, for the purpose of that estimate.

92. Statement E. you will find at the bottom there. That is not brought into your table?—No, because I thought it best to confine it to coinage merely.

93. Do you think you could work out that as deducted from the amount consumed? Do you think you could work out what came from old coins?—I think Mr. Fremantle would be able to assist the Commission on that point. The officers who test the bullion received would be the best judges.

94. As to the gold coinage in this country, we have it on page 318 that the amount re-coined was 14,955,165*l.* from 1872 to 1885 in London. The next question I

would ask you is this: You speak of the amount of gold that was said to be afloat in this country as from 95,000,000*l.* to 105,000,000*l.*, I think?—Yes.

95. Have you any information, going back over a number of years, which would show whether that had decreased or increased?—I think it has increased within the last 20 years.

96. Have you anything to bear that out. The common theory is that it has decreased very materially?—I think hardly so, as compared with 20 years since.

97. I have not any data on the subject, but I think that the common theory is that it has decreased some 25,000,000*l.* sterling within the last few years?—The best estimate was one made by Professor Jevons about 20 years ago, and all other estimates which I know of have been based upon that, and the method that he employed.

98. In the amount of gold that you state as being afloat in this country you include light gold?—Certainly.

99. Are you aware that it was stated in Parliament that the amount of light gold held by the different banks was 10,000,000*l.* sterling, and to that extent the scarcity of gold was intensified?—I should greatly doubt the light gold held by the banks being so large an amount as that, if you mean coin so light that it could not be put into circulation.

100. Do you think that would have any bearing upon the general question of the supposed appreciation of gold, the amount locked up in deficient coin in this country?—None whatever.

101. (*Sir T. Farrer.*) I wanted to ask a question with regard to one figure which I do not quite understand in column 10, page 323, namely, the coin existing, or supposed to exist, at the end of each period. It seems, from what comes afterwards, that that is the amount by which the existing coin had diminished. *See* Table 4, page 323?—This is a table which was prepared by Mr. Newmarch. It is an assumed amount of gold and silver coin in existence in the year 1829.

102. But then when I come to the memorandum by Mr. Palgrave, which follows, I find that this 67,000,000*l.* is not the amount existing, but the amount by which the existing coin had diminished in that period. There is something in the figures which I do not quite understand?—I put that memorandum in to make the matter clear. You will see that the export and the amount used and the loss by wear and tear is estimated at 170,000,000*l.* in all. The produce of the period is estimated at 103,000,000*l.*, and the amount existing in the form of coin was thus assumed to be less at the end of the period.

103. Thus, when you deduct 103,000,000*l.* from 170,000,000*l.*, you have 67,000,000*l.* left?—Yes.

104. And that is the net loss during the period?—Yes, no question.

105. But in the column 10 it appears to be the amount left in existence?—If you look in column 11 you will see the quantity of coin accumulated in existence stated, which you will observe, is 67,000,000*l.* less than the statement immediately above it.

106. Column 10 is supposed to be the quantity of coin existing at the end of each of those periods, that is, reckoning each period by itself, taking the production of the period by itself and the use by itself?—That is the balance, either more or less. It was considered that there was 67,000,000*l.* less at the end of that period than there was at the beginning of it.

107. Then the heading might be a little clearer?—It is a table which I employed and which I did not feel at liberty to alter as it was a quotation. I added a note to make the meaning more clear.

108. Well, now I wanted to ask you, now that we have got the statistics of production, do you know how those statistics are obtained?—Not further than is mentioned by Dr. Soetbeer and the other authorities cited.

109. Do you take them simply from the statisticians who have given them?—I took them on Dr. Soetbeer's authority. I was not able, in the time at my disposal, to make an independent inquiry.

110. Do you know how he gets them? Is it from returns from the mines?—I believe they are based on official figures.

111. All we can take is the different methods of the different statisticians upon their authority?—Yes.

112. So it is upon their authority that we take the production?—Yes.

113. Well that is so far as the production is concerned. Next the exports from Europe. Those we get, I suppose, with more or less accuracy from official returns of exports or imports?—I would refer, I think, to a statement in Dr. Soetbeer's book in which he compares the movement of the precious metals between England and France as given in the English records and in the French records, and a very considerable difference is shown between them.

114. So that this is not a very accurate figure after all?—No, I have never felt that one could place very great reliance upon those figures.

115. (*Chairman.*) Are they more incorrect than any others relating to the subject that we have?—I have been informed that there is considerable doubt about them. I have always, for my own guidance, put far more confidence in the statements of the amounts held by the large banks in different countries than in any other statements respecting the stocks of the precious metals held in those countries.

116. (*Sir T. Farrer.*) Have you any certainty that our returns of imports and exports of bullion include all the bullion imported or exported?—I could only employ the official returns.

117. The next item is the quantity converted into articles of use and ornaments. That is very little more than a guess, I presume?—I should think so.

118. With regard, for instance, to silver used in electro-plating in this country, it is an absolute guess, is it not?—Yes; but the period under consideration is long before that method of manufacture was employed.

119. But I only take that as one item. I suppose we do not in the least know what is used in that form?—I think you could get at that particular information, probably, by applying to the principal manufacturers; but the use of silver is so large and in so many different forms that it is almost impossible to trace it.

120. Then the loss by wear of coins and casualties again must be very much of a guess, must it not?—No question.

121. Consequently, our statistics after all are very loose?—You remember Mr. Bagehot said about them that they were not worth the paper they were written on.

122. The amount existing in the form of coin at each period is also an entry which must be quite equally uncertain, is it not? We have not the least idea what amount of coin there is in the pockets of people in this country?—I think you could not rely upon that with any very great accuracy.

123. Still less, I suppose, can you rely upon any estimate of the whole quantity of coin accumulated and existing in the world at any time?—Certainly. You must use the best figures you can get.

124. And they are not worth very much?—Well, they are an assistance, no doubt.

125. Then with regard to the quantity of money coined, that is another item of guess?—I have already gone into that, and said that it is absolutely impossible to tell how much of that is due to re-coinage. It is most difficult to find that out, but I think that it possibly might be ascertained by inquiries from the different mints.

126. Would the Mint be able to tell whether the gold which they coined had at any previous time been in the form of coin or not? Do you think that statistics could be obtained of the amount of gold coined which is re-minted in the different mints of the world?—I think by application to the mints you could get a great deal of useful information. In the case of England you would, I take it, have to apply

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to the Bank of England for the particular information.

127. Do you think that it is possible to ascertain how much of the money which is coined each year is coined from fresh metal from the mine, and how much of it is due to the re-coinage of gold or silver which has at some previous time been in the form of coin?—I do not suppose that it would be possible to answer this question with absolute accuracy, but I think you might obtain some useful information by applying to the various mints, and possibly also to the refiners of gold, if they were willing to give you the information.

128. Do you suppose that at any mint they would be able to tell you whether a bar of refined gold had come straight from the mine or whether it had previously been in the form of coin, had been melted down, and then refined again?—If that gold had in it the proportion of alloy which was peculiar to a particular coinage, no question they would know at once whence it came, but where it had been refined it would be more difficult to trace it.

129. (*Mr. Fremantle.*) Take the sovereign coinage, for instance. You are aware that more than 300,000,000 sovereigns have been coined, and you are also aware that the best estimates, your own among the number, give the existing coinage in this country at not more than 100,000,000*l.* You are also aware that there are statistics showing what the probable amount of sovereigns in the rest of the world is, and that would give you, would it not, a very good criterion of the amount of sovereigns, for instance, that had been melted up?—So far as those estimates go they would give that information.

130. And the result of those estimates, taking them as they stand, would be that a very large proportion of the sovereigns that have been coined since 1816 have been melted up?—No question; the larger proportion.

131. Your memorandum says that the imports of gold into India have of late years increased, and then you give some statistics that you have received. Have any statistics ever been given as to the amount of gold supposed to be in India in one shape or another?—Yes. I believe there have been various estimates of the amount.

132. Could those estimates be laid before the Commission?—I have no doubt the India Office is in possession of them. I have never attempted such estimates myself.

133. Could you give the Commission any statistics as to the amount of gold believed to be in the world, say, at the beginning of the century, 1820, 1840, and 1860, with comparative statements as to the volume of trade and the population of the different periods?—I have not prepared any statistics of this description.

134. But such statistics would be useful, would they not, in order to show, so to speak, what the function of gold has been in relation to commerce?—I am afraid they would be so very conjectural. I should hardly value them much myself.

135. But it would be desirable, in your opinion, that such statistics should be obtained, if possible, in order to show what the function of gold has been with regard to commerce?—Yes, it would be useful, if it could be obtained, no doubt.

136. (*Mr. Houldsworth.*) On page 326 of your memorandum you say "If these statements can be "accepted as generally correct, the following points "appear," and then there is number one, which refers to the proportion of the production of gold and silver to the coinage. I presume that that statement, or that conclusion, or the point that you bring out there, is affected by the question of re-coinages that we have been hearing of?—No question.

137. And would very seriously affect it?—I have no doubt that it is the explanation of the matter to a great extent.

The witness withdrew.

Second Day.

Thursday, 25th November 1886.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. L. COHEN, M.P.
SIR. T. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.

MR. GEO. H. MURRAY, *Secretary.*

Mr. S. Pixley.

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MR. STEWART PIXLEY examined.

138. (*Chairman.*) You have given a great deal of attention, have you not, to the question of the production of the precious metals, and the amount actually in use in the various countries of the world?—Yes, I tried to get the most reliable information that I could.

139. Can you furnish the Commission with a table showing the average price of silver in London over a series of years as compared with gold?—I have prepared a table, which I will put in, showing the average price of silver each month, from 1833 down to 31st October 1886. (*See* Appendix I.)

140. From what source did you derive the information which you give us in this table?—Since 1852, from our own books. That is the year in which I commenced business; previous to that, from the books of the Bank of England melters, Messrs. Brown and Wingrove, who were kind enough to give the figures to me.

141. And I suppose that we may take these figures as being trustworthy?—Actual business transactions.

142. Has the price of silver at any time differed in other markets materially from that which has ruled in the London market?—I should not think very much so, because it is so soon balanced by orders transmitted to this market by telegram or cable. It is higher just now in New York than here.

143. But the rapid means of communication between one market and another practically bind together all the markets of the world, I suppose, as regards bullion?—Yes.

144. And has that been so during the whole period over which your tables extend?—I speak of 1852; my experience does not go beyond that.

145. That was before telegraphic communication had been made with France, and had so connected the markets?—There was no submarine cable to France in June 1852, but before December 1852 there was.

146. But even before that time, I suppose, any difference in prices in the two markets very rapidly

corrected itself?—Yes; it was only a question of two days at the outside.

147. Can you give the Commission any statement showing the production of gold and silver respectively over a series of years?—Of gold from 1852 to 1885; silver from 1852 to 1885, with the exception of four years, 1873, 1874, 1875, and 1876, and those I cannot get anywhere.

Production of Gold from 1852 to 1885.		Production of Silver from 1852 to 1885.	
	£		£
1852	36,000,000	1852	8,120,000
1853	31,000,000	1853	8,120,000
1854	25,000,000	1854	8,120,000
1855	27,000,000	1855	8,120,000
1856	29,500,000	1856	8,130,000
1857	26,500,000	1857	8,130,000
1858	24,900,000	1858	8,130,000
1859	24,900,000	1859	8,150,000
1860	23,800,000	1860	8,160,000
1861	12,650,730	1861	8,540,000
1862	20,412,940	1862	9,040,000
1863	20,733,560	1863	9,840,000
1864	17,887,220	1864	10,340,000
1865	13,886,280	1865	10,390,000
1866	24,035,850	1866	10,145,000
1867	15,890,160	1867	10,845,000
1868	19,141,900	1868	10,045,000
1869	13,833,370	1869	9,500,000
1870	18,420,230	1870	10,315,000
1871	22,874,340	1871	12,210,000
1872	19,239,340	1872	13,050,000
1873	21,300,000	1873	
1874	19,400,000	1874	
1875	22,363,480	1875	
1876	23,663,680	1876	
1877	15,251,050	1877	16,208,000
1878	20,738,470	1878	18,976,000
1879	13,110,440	1879	19,234,000
1880	9,346,100	1880	19,340,000
1881	9,962,790	1881	20,433,000
1882	14,375,750	1882	21,190,000
1883	7,733,300	1883	22,843,000
1884	10,720,360	1884	23,000,000
1885	13,373,940	1885	17,500,000
	668,945,280		

148. Are these also derived from information which has come across you in the course of your business?—Yes, and from all the best totals that I could get.

149. Why do you choose 1852 as the year with which you start?—I began business in that year, and my books go back only to that.

150. I think the Californian discoveries were usually dated about 1847, and the Australian about 1850–51?—I believe you are right.

151. So that practically you can only give us the figures after the production of gold had reached something like its maximum?—That is all.

152. In fact, I observe that the first year that you have given us is the year of largest production during the whole series of years respecting which you furnish information?—Yes, I believe it is.

153. How comes it that between the years 1872 and 1876 you have not been able to obtain similar information to that which you have given us for the other years?—The papers have been lost.

154. The papers of your own firm?—Yes; no doubt you will get the figures.

155. Have you compared the estimate which you have handed in with that which has been made by other statisticians for the same period?—Yes, the Bankers' Institute. The secretary was kind enough to check a great many of my figures for me, and his figures, although showing what he considered a considerable variation, are still very close.

156. Are these figures your own figures uncorrected by the Bankers' Institute, or are they your figures as corrected?—Corrected by the Bankers' Institute and Mr. Seyd's book.

157. Is the modification introduced into your original figures by those sources of information important?—Sometimes about a million or a million and a half per annum; I do not think more.

158. That would be, roughly speaking, not more than about five per cent.?—Yes.

159. Have you compared these figures with those which Mr. Soetbeer has collected?—I have not.

160. You have not seen Mr. Soetbeer's estimate?—Well, I have seen it, but I think his has been incorporated with several others that I have seen.

161. So that you think that when the correction was made by the secretary to the Bankers' Institute he took account of Mr. Soetbeer's estimate as well as other estimates that have been made independent of your own?—I should think so.

162. Can you explain to the Commission by what means your firm arrived at the results which they have embodied in these figures?—Well, the chief means we took were first an account of the arrivals of bullion that came into England at all the ports.

163. (*Sir T. Farrer.*) From the official statistics?—No, there were no official statistics until, I think, the year 1854, but Mr. Seldon, who is the head of the Statistical Department in the Custom House, used to come up to check the statements of imports and exports with us, and finally, when he complained of the trouble and difficulty there was in getting any reliable statistics, I suggested to him whether the Commissioners of Her Majesty's Customs could not induce the Government to pass a short Act to make people declare the bullion on arrival and shipment. It used not to be declared at all, and was entirely dependent on the ship's manifest. There is now an Act that people must declare bullion, gold, and silver, though we know that there is shortage now. Still, it is very much more accurate than it used to be.

164. (*Chairman.*) Before that Act passed you simply arrived at your results by examining the ship's manifest?—By watching in the papers we could see in "The Times" the so and so ship arrived with so much in gold, so much in silver, and so much in Mexican dollars.

165. Having thus arrived at the amount imported into the United Kingdom, how did you proceed from that to draw any conclusion as to the total production of the world?—We got that from a variety of sources.

166. Could you give us some account of the sources, in other words could you tell us how you set to work to compile from the data at your command the figures which you have laid before us?—I went to the books compiled by the Secretary to the Treasury at Washington, Mr. Ernest Seyd's book, the Bankers' Institute, that is a very late authority, still they have got some very valuable books in their library, and books which the Secretary compiled, and papers that have been published since.

167. Then these figures are not so much the result of your own experience in business as the result of work which you have undertaken as an independent statistician?—Yes.

168. Are you inclined to think that these estimates are trustworthy, as a whole?—I think so, as near as you could get for such enormous amounts, as near as you could expect them to be.

169. Then, by the use of similar means, you could of course have obtained figures going back much earlier than 1852?—I found very great difficulty in getting beyond 1852.

170. Why was that?—I could not find them in any print, in any books.

171. Mr. Soetbeer goes back, I think, far earlier than that?—Yes; to 1493.

172. But you have not been able to find any figures practically before 1852?—No, none.

173. Now, to turn to questions of consumption, could you give us any statistics relating to that subject, classifying consumption under the heads of coinage, industrial purposes, wear and tear, and hoarding?—The consumption for coinage I did not pay much attention to, because I could get that by reference to the publications of the deputy master of the Mint.

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They have been got up so accurately that I have not taken so much notice of that.

174. But, surely the Mint would only have accurate statistics for the United Kingdom. You have made no attempt to estimate the coinage of other countries?—No, not at all.

175. Have you made any attempt to estimate the consumption under the head of industrial purposes?—Yes, for gold, and the nearest that I could get (and this has been confirmed by Mr. John Martin) is the Bankers' estimate of gold consumed in the arts, manufactures, &c., 2,000,000*l.* per annum for the United States; 2,000,000*l.* for France; 3,000,000*l.* for England and Holland; and the next leaves a very wide margin indeed, from 5,000,000*l.* to 10,000,000*l.* for India. But as to this last it is supposed to include a great portion of that purchased in England, but you cannot be quite sure that it was absolutely sent to India.

176. Why cannot you be sure?—You do not know whether it absolutely went to India.

177. It was purchased for India, but you have no proof that it has gone there?—No proof.

178. But this 5,000,000*l.* for India, which you state is the amount required for industrial purposes, is that to be distinguished from the amount which under the head of hoarding would also be put to the credit of India?—Distinguished from it.

179. The meaning of my question is this: We all know that there is a great deal of hoarding in India, but it is largely in the form of bracelets and articles of that kind. Now, it is clear that hoarding in the form of bracelets may either be described as consumption for industrial purposes or consumption for the purpose of hoarding?—The average of hoarding for India for 20 years from 1865 to 1885 is supposed to have been at the rate of 3,200,000*l.* per annum.

180. That would bring up the total for India, according to your estimate, to a little over 8,000,000*l.*?—Yes; India itself 8,000,000*l.* But I think that bracelets and articles of that kind can hardly be considered entirely as hoarding. They are works of art or ability. I may mention that I have here a bar which is the shape in which nearly all the gold that goes from England, with the exception of sovereigns, now goes. It is a 10-oz. bar. It is fine gold 998. Those bars pass from hand to hand. A brother of mine met with them in changing notes 25 years ago in Cashmere, and he noticed the stamp of my firm on them.

181. So that to all intents and purposes they pass as currency?—Without any doubt.

182. In this table you have dealt with the United States, France, England, Holland, and India, but there is no mention made of Germany and the rest of Europe?—I could not get it at all.

183. Nor of Spain, South America, or the rest of Asia?—No.

184. Do you think that the amount required by these countries for the purpose of arts and manufactures is large?—I think it is for Germany.

185. Have you compared your estimate with that of Mr. Soetbeer on the same subject?—I have not.

186. Mr. Soetbeer's estimate is 12,500,000*l.* for the whole world. Your estimate would come to something between 12,000,000*l.* and 17,000,000*l.* for the United States, France, England and India?—Yes.

187. So that your estimate is a far higher one than Mr. Soetbeer's?—Yes, I believe it is.

188. But you have had no opportunity of noting the data which Mr. Soetbeer has used, and therefore you can give no estimate of the comparative trustworthiness of the two sets of tables?—No, I cannot.

189. Can you give us any idea of how you have arrived at these figures?—From the Bankers' Institute. Mr. John Martin gave me them.

190. But you have not yourself independently checked them?—No.

191. And you are not aware how the Bankers' Institute got them?—From books in their library.

192. But you do not know what the books were; you have not gone into that question at all?—No.

193. So that practically you can simply give us these figures on the authority of the Bankers' Institute?—Yes.

194. And you cannot tell us what reliance the Bankers' Institute themselves are disposed to place upon them?—No, I cannot.

195. I think you told us just now that you had made no estimate of the coinage of all the world, but that you had got from the Mint the coinage for the United Kingdom?—No; I could get it from the Mint Reports, but I have not taken it out.

196. Have you got any facts relating to coinage?—Only the gold available for the supply of coin for the periods of 10 years from 1851 to 1884.

197. By available do you mean really used for coinage?—Actually in this country for the supply of coin.

GOLD BULLION available for the supply of Coin.

Period.	£		Per Annum. £
1851–1860 -	227,800,000	at the rate of	22,780,000
1861–1870 -	140,600,000	„	14,000,000
1871–1880 -	102,550,000	„	10,255,000
1881–1884 -	16,200,000	„	4,050,000

198. Can you give us any estimate of the amount of coin actually in the hands of the public and the banks at any periods in this country?—For that I am rather dependent also on the Institute of Bankers, and perhaps you may have had before you the census that they took, assisted by nearly all the private banks in the United Kingdom, in March 1883.

199. What is the result of that?—It showed that the amount of gold held by the banks, including the Bank of England, was 22,010,000*l.*

200. The amount at that date in the banks?—Yes.

201. Not in the hands of the public?—No.

202. Have you any estimate of the total amount in the hands of the public, including the banks?—No.

203. (*Mr. Birch.*) That 22,000,000*l.* included the light gold?—Yes, everything.

204. It was the gold coin, not the gold, that you estimated at 22,000,000*l.* just now, as the estimate which you received from the Bankers' Institute?—Yes.

205. The gold coin?—Oh, no; it did not mean the reserve or the bars held by the Bank of England.

206. I asked whether it included the light coin, and you said, Yes. Outside they treat it as ordinary gold coin, inside we do not.

207. (*Chairman.*) Is it possible to distinguish between that part of the bullion available for coinage, which comes straight from the mines, and that which is old coin re-melted?—From the mines it might be, unless the gold is refined here. For instance, of the refinable gold that comes here we have a very large amount of it.

208. What is refinable gold?—Gold containing silver. It pays a refiner to give a little extra price for it, and he takes his profit out of the skill with which he can recover the silver from it. We sell all that, either to Messrs. Rothschilds or Raphaels, the refiners, two of the largest in the world and two of the best in England. They pay cash for it directly,—there is no credit in our business,—and they bring out the gold 998 fine, as fine as this bar. Not even the clever chemists of the Mint could tell where that came from. Once gold is refined, its origin is quite lost. It is very different from bars melted from coin and sent in. Then you could trace it very closely.

209. Do you think that coin is melted down before being sent in for re-coinage?—Very often, when it suits. Just now, with Spanish coin, it would be melted down; with Dutch coin it would be melted down.

210. If that melted coin is put through no process of refining, you could discover that it was coin re-melted?—I daresay they could give a very shrewd guess for every bar that they handled.

211. Is it ever worth while for itself to melt down coin for the purpose of re-coining, to refine it so that its origin would not be known?—Not unless there was something very important wanted, because it is nearly all alloyed with copper.

212. (*Mr. Birch.*) Is it not the case that gold sent to Spain is generally refined?—Yes.

213. As to whether you could distinguish between gold that proceeded from coinage melted, or direct from the mines, the gold that you referred to as containing silver comes direct from the mines; it is not the proceeds of coinage. It is refined because it contains silver, and it pays to be refined. That has nothing to do with the coinage melted?—No.

214. When you send it to India you know it must be refined gold. Spain is not the only country; there are several countries that would only take fine gold?—You cannot send gold of less purity than that (*showing bar witness produced*) to India, but Spain would take less fine gold than that.

215. (*Chairman.*) Then we may lay it down generally that while in England it is not customary to refine re-melted coin, in many other countries it is customary; and therefore it would be impossible to find statistics to show how much of the bullion sent in for re-coinage is old coin, and how much comes straight from the mines?—Yes.

216. (*Mr. Birch.*) You said that a great deal of coin was melted. Now, I think since the Bank raised its price for coined gold, as it did some years ago, with very few exceptions, the gold goes into the Bank in coin?—Formerly it used to pay people to melt it, and sell it to the Bank as bar.

217. That is not the case now?—No.

218. Therefore, you would find that very little coin, except what is sent abroad, is melted and refined?—Very little, except in those countries where the assay is not what it ought to be.

219. (*Chairman.*) I think I understood you to say that you have not yourself looked into the question of the consumption of gold for arts and manufactures?—No.

220. Have you looked into the question of waste by wear and tear of coin?—No.

221. And you have no original information with regard to the hoarding in India or elsewhere?—No.

222. Have you looked into the question of the total stocks of the precious metals existing at various epochs of the world's history in the form of coin?—No, I have not.

223. Have you considered whether any useful conclusions can be drawn from the import and export of bullion and specie, with regard to the changes which may have taken place in the distribution of the precious metals among the different countries of the world?—I do not know what use they would be excepting to statisticians.

224. You think in fact that no useful inferences can be drawn from them?—I do not know of any.

225. Do you think it is possible to make any forecast as regards the future production of the precious metals?—I think in many countries it would be something of a guess-work, but I think we shall see a very much increased production from India, and especially from the Cape.

226. Of gold or silver?—Of gold. In talking the other day with Mr. Matthey, who is a colleague of mine at the Goldsmiths' Hall, and one of the Bank of England assayers, he was mentioning to me some conversation he had with a friend who had just arrived from the Cape. He heard there of the enormous amount of gold that had been discovered during the Portuguese occupation of the part of their territory that they were afterwards turned out of. Mr. Matthey said I might use this if it would be of any interest to you. You can consider it for what it is worth: "The amount of gold taken by the Portu-
"guese when they had possession of the district in
"the Transvaal or some other part of South Africa,—
"I don't know the spot,—until they were driven
"out by the Kaffirs, amounted to 1,000,000*l.* sterling
"each year, or 4,500,000*l.* altogether."

227. What date does this refer to?—Just before the people were all driven out.

228. (*Mr. Birch.*) Last century?—Would it be so long ago as that? Yes, I daresay it might. But the gold is there, any quantity of it; and this gentleman is home in England now. The estimate of the production of gold is at least 10 per cent. in the next few years over the past. That is the general estimate formed by the miners.

229. (*Sir T. Farrer.*) Over the whole world?—Yes, over the whole world, without counting any future discoveries.

230. (*Chairman.*) Is that increase chiefly from India and the Cape?—India and the Cape and Queensland. The Queensland mines are turning out very rich.

231. Have you any similar forecast to make with regard to silver?—No.

232. Is it the best opinion that the American mines are going to prove as fruitful in silver as was supposed a year or two ago?—I think there are discoveries every day. Their working depends a good deal on the price at which the silver can be sold. Very few mines can produce silver for less than 85·4 cents, which is equivalent to 3*s.* 6*d.* per oz. One or two large mines were shut down, but that was because the men refused to reduce their pay.

233. So that directly silver sinks to 3*s.* 6*d.*, or rather in proportion, I should say, as it approaches 3*s.* 6*d.*, the production decreases?—The mines are shut down. The men get wages of five dollars a day in gold. There is one mine I am allowed to mention the name of, the Blue Bird in Butte city, that can produce their silver at 1*s.* 2·9*d.*

234. (*Mr. Birch.*) Have you any idea what proportion the wages bear to the general expenditure?—It varies in every district. All the Montana district is governed by the wages in Butte and by the knights of labour.

235. I want to know what proportion of the general expenditure of a mine is represented by wages?—I cannot tell you.

236. Because there are royalties?—The chairman of one of the largest mines in Montana said: "We could produce our silver at 1*s.* 6·3*d.*"

237. (*Mr. Cohen.*) Where is that laid down, at the mine's mouth?—At the mine.

238. (*Chairman.*) But that is extremely exceptional?—That and the Blue Bird are two exceptional cases.

239. On the whole we may say that directly silver reaches the lowest point it has yet reached, a very rapid falling off in the production may be expected?—Yes; the mines may be shut down unless the men consent to work for less, and they will, after they find one mine after another shut down, as it means starvation to them. They cannot travel very quickly over these huge tracts of country.

240. But still taking a course of years is it the opinion of those best acquainted with the subject that 3*s.* 6*d.* is the lowest point at which silver can be produced to yield a profit?—Yes.

241. (*Mr. Cohen.*) I should like to know whether your answers refer only to the silver mines of North America, or silver mines in other countries?—Chiefly North America.

242. You are not acquainted with the cost of production in South America, Mexico, or the Pacific Coast?—No.

243. (*Mr. Fremantle.*) How would you reconcile the statement made by the correspondent whom you quoted that silver could not be raised at less than 85·4 cents per ounce, with the other statement made as to the cost of production at Montana?—He assumes 85 for the general country of America, North and South.

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244. (*Chairman.*) I suppose silver mines are like other mines, they vary in productiveness?—Very much.

245. And according as the price of metal sinks, so one mine after another is extinguished; but the number of mines that can produce silver at less than 3*s.* 6*d.* is so small that we may practically ignore them, and state generally that 3*s.* 6*d.* is the lowest price at which it can be produced at a profit?—Unless wages are lowered.

246. With regard to the question just asked by Mr. Cohen, as to whether your facts referred to the United States alone or to other countries, is it not the case that of the 25,000,000*l.* of silver now being produced, 10,000,000*l.* comes from the United States?—I should think it did, quite.

247. And including Mexico and the United States 16,000,000*l.*?—I should think it quite likely.

248. Leaving only 9,000,000*l.* for the rest of the world?—I think it is quite likely.

249. In the facts that you have given us, do you refer to Mexico as well as to the United States?—Yes.

250. (*Mr. Birch.*) During the years 1872 to 1875 a large quantity of gold poured into Germany with a view to establish a gold currency in that country. Can you give us any idea whether this gold was from recent productions of the metal hoards in Europe or elsewhere, or the currency of gold-using states. I believe you purchased a great deal of the gold that went to Germany?—I should think an enormous deal of it came from Australia, a very large amount indeed from America, and you know best the amounts that were taken out of the Bank of England at times. They went to the Bank of England in the last resource, when we were compelled to take it, but we stopped millions of sovereigns at Brindisi and Naples, that were coming home. They were delivered there and paid for in London by telegram the same day.

251. If we gave time I daresay you would be able to draw up very interesting notes in regard to that?—I would try.

252. To see what amount of our gold currency may have been melted and sent away in bars?—Yes.

253. During the years 1881 to 1883 in like manner 18,000,000*l.* sterling in gold were remitted to Italy, being the proceeds of a loan contracted in London. Can you give us any idea as to whence this gold came?—I was answering that, as I thought, more in the last answer, because it was for Italy that we intercepted the sovereigns, not for Germany.

254. We find that during the last 10 years the following loans have been negotiated in London for gold-using States:—Argentine Republic, 6,941,900*l.*; Buenos Ayres, 4,303,300*l.*; Brazil, 9,900,800*l.*; Portugal, 31,354,160*l.* The Commission understand that on each occasion a certain amount of gold was remitted to these countries in virtue of the said loans. Can you give us any particulars as to the amount so remitted; whether any has been returned to this country; and if so, what amount?—I should think nearly the whole of the remittances have been sent in sovereigns from this country, and they come back gradually in amounts from 5,000*l.* to 10,000*l.* and 15,000*l.* a steamer.

255. But you have no idea of the total amounts?—No; I think it would be impossible to say.

256. (*Mr. Cohen.*) Have you any opinion as to the amount of gold in circulation in this country,—whether it has increased or decreased within the last 20 years?—No, I have not.

257. In the table that you have put in just now there is the amount of silver coined each year since the year 1833, I think. That is the amount of new coinage; it takes no account of anything that has been re-coined?—No.

258. The international movements of sovereigns which you spoke of just now, are they always in whole sovereigns or half sovereigns?—Always whole.

259. Half sovereigns do not travel about from one country to another?—They would, but they are in such a bad state that nobody likes them; they are so light.

260. With respect to light gold the amount of light gold locked up in the different banks is said to be 10,000,000*l.* sterling; have you any opinion on that subject?—No, excepting that in the course of conversation with the Secretary of the Bankers' Institute, he gave me that amount too.

261. You do not think that there are any authentic data on that subject?—No.

262. Would you connect that with the locking up of gold in this country?—No, and I think people would not take a half sovereign if they could avoid it; they do not go now as they did on the continent.

263. (*Mr. Birch.*) All the gold exported coming from the Bank of England is full weight?—All of it which is in sovereigns. I may mention that in 1883 I got some information for the late Professor Fawcett as to the estimated gold and silver coin in circulation for the whole world. Gold 670,734,750*l.*; silver 524,153,970*l.* He considered it accurate enough to reproduce in his lecture at Cambridge.

264. (*Chairman.*) That puts the total amount at nearly 1,200,000,000*l.*?—Yes.

265. In what year?—That was in May 1883.

266. (*Sir T. Farrer.*) You gave the price of silver from 1833?—Yes.

267. Are there tables showing the price back into the last century that one can rely upon?—I believe they could be had at the Bullion Office.

268. London is the chief market for silver, is it not?—Yes.

269. And the London prices practically rule the world?—Practically govern the whole world. They are paying a little more just now in New York than we are.

270. If persons want silver in any other part of the world, is it London that they apply to?—Unless it was China, and then they would get it at the San Francisco side.

271. Is the French Government now buying silver in London?—Yes, very largely. Yesterday they stopped for a time, and down went the silver market.

272. What are they buying it for?—Coinage for the Tonquin dollar, I am told.

273. They have an immense store of silver in France?—Oh, yes.

274. Have the United States Government ever bought silver?—I do not think they bought any. I could give you the exact year we bought very largely. We were the London agents for the San Francisco people. In one week we bought something like half a million sterling to go back, and the very same week we received about half a million from them.

275. Does it actually come and go?—They thought at that time that they might be "cornered," so they positively bought half a million of silver.

276. It actually went back?—Yes, only I should say not in the same shape. The bars that we had from them contained gold for refinable silver.

277. Is there at any time a flow of silver from this country to the United States?—No, not often; not of late years.

278. I heard when I was in the United States that the United States Government were unable to obtain in the United States silver enough for their Bland coinage at the London prices, and that they had been obliged to go elsewhere?—That is quite true. The price yesterday was five cents. higher in New York than our price. This morning I had a message on my desk stating that they could not give us any at the London rates, they were getting higher in New York.

279. Do you know that there has been lately a premium on gold in France, and what it amounts to?—I do not know.

280. (*Mr. Fremantle.*) You said that the silver coined in England in your list only included silver coined from bar?—Oh, no.

281. I understood you to say so. The amount stated in your list included re-coinages?—Yes.

282. Then you said that half sovereigns were not exported because they were very light?—Yes.

283. But is there not another reason why half sovereigns should not be exported, namely, that full weight half sovereigns would not be so heavy as full weight sovereigns?—That may be very likely.

284. For the reason that the difference between the full standard weight and the lowest current weight of sovereigns is less than the difference between the full standard weight and the lowest current weight of half sovereigns?—Yes, you could not get a lot of new half sovereigns, you know, and I do not think it would pay if you could.

285. Even if you could get current half sovereigns they would not necessarily be so heavy as current sovereigns?—No.

286. (*Mr. Houldsworth.*) Can you give any facts or figures showing in general terms what has been the course of the demand for gold and silver respectively during the last 40 years?—I could not give it you in terms.

The witness withdrew.

Sir HECTOR HAY examined.

287. (*The Chairman.*) You have given a great deal of attention, I believe, to statistics, concerned with the production of the precious metals, have you not?—Yes, I have.

288. And you have prepared tables dealing with the question?—Some tables of mine were brought before a Committee of the House of Commons some time ago, and I have continued them from that time up to the present.

289. Was that Mr. Goschen's Committee of 1876?—That was so.

290. You have continued these tables from the year 1876 to the present year?—I have; they are here. (*See* Appendix II.)

291. From what date do they begin?—If I remember right it was 1847, at the time of the discovery of gold in California, and subsequently in Australia. It was from that point that I took up the statistics.

292. Could you let me see the tables?—These are the present ones, from 1871 up to the present.

293. Could you put in both sets of tables?—I have not got a copy of the earlier tables. There is a number of things added to these tables which were not in the original ones, which were simply the production. Here you will see I have put in a good many other items.

294. I see you here give "Estimate of the production of the world," then the imports and exports of England and India, respectively; then the coinage of sovereigns, and coinage of the principal foreign countries. Could you add to the tables that you gave to the Committee of 1876, facts on these other points, so as to make the two tables continuous on all the subjects dealt with by this table?—I do not know that I could get the particulars so far back as that.

295. It would be very important if we could obtain it, to have all the facts dealt with in this table for the whole period. Do you think it is possible to obtain those facts?—I think it is possible; it would take much time.

296. You think you have sources of information which would enable you to give the facts?—I have only the same sources as anyone else who takes the trouble to go into it. I should have to apply to the foreign Consuls and people connected with the trades of the different countries to find out from the Mints there, or whatever it may be, to ask them what they had done. I have no other means of doing it than that; it must be done by inquiry, which anyone could do as well as myself. In point of fact, the only way in which it could be arrived at with any degree of accuracy would be for the Consuls in different places to be required to make returns of these matters. They could find them out much better on the spot than it could be done here.

297. They could, in fact, obtain from the records of the Mints facts which would enable them to form some kind of estimate?—I have no doubt they could. In some countries they would not give the information possibly, but I daresay they could find it out.

298. You have divided your heads of production into North America, Australia, Mexico, and South America, Russia, and other countries. I suppose your figures from Australia are the official figures?—From the Royal Mint returns. I got them from the year books published in New South Wales and Victoria.

299. From the United States?—They are their own. There is, however, an explanation I wish to make with regard to them. My figures differ somewhat from those of the Director of the Mint of the United States, for this reason, that I got my figures from the annual statement of Wells, Fargo, & Co.'s manager, Mr. Valentine, who gives the value of the production in the United States in different figures from the Mint; and I think he is more likely to be correct than the Mint figures, for this reason, that when the Mint authorities send round to the different mines to ascertain how much they have produced, it is to the interest of those mining companies to exaggerate their production a little, whereas when they send their bullion by Messrs. Wells, Fargo, and Co., all the different mines would declare the actual values. The mining companies would not wish to pay freight on more than the actual value, and on the other hand they would not like to declare a less sum because they are insured in the same way, and therefore I think that Wells, Fargo, & Co.'s estimate is more likely to be correct than that of the United States Mint Director.

300. Do you think that the figures of the Australian Mint are liable to the same source of error with the United States?—I think not.

301. Why not? Would not the mining companies have the same motive to exaggerate their production as the United States?—They would have, but I do not think that would be carried to the same extent as in America.

302. Then I understand the United States estimate is not an official one; the Australian one is an official one?—That is so.

303. Then Mexico, and South America?—It is a very difficult thing to say how that is arrived at. A great deal comes from the Director of the United States Mint, and Dr. Soetbeer's reports, and from a number of other quarters. I have sent round to the Consuls of the different States, and got from some of them estimates, and from others none at all. I judge that my estimate as to Mexico and South America is pretty nearly correct, though not so large as that of Dr. Soetbeer and of the Director of the United States Mint, for this reason, that I believe at least seven-eighths of the production of silver and gold in those countries, with the exception mentioned below, come to England; and on comparing the amounts estimated by Dr. Soetbeer and the United States Mint I find a great discrepancy. The exception is that about half of the silver coinage of Mexico (which is almost equivalent to the production) goes to San Francisco, and, making allowance for that, I think the figures I have taken nearly represent the production of the mines.

304. One of your sources of information was the Report of the United States Director of the Mint?—Yes, the United States Government instructs its representatives in different States to make inquiries,

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and there are reports given by those consuls and ministers in different places. I have taken the figures they have given where the United States Mint Director has taken them.

305. The United States Mint Director simply makes an estimate from the same sources of information that you have open to you?—In fact, the United States have better, because the United States Government commission their representatives in different States to make the inquiries.

306. The United States Mint has no direct interest in anything the mining companies may do; the money does not come direct to it?—Oh, no; it inquires what is the production and the amount of the coinage.

307. Does your estimate differ materially from the United States Mint?—Yes, it does. It is below.

308. Have you modified yours in accordance with the estimate of the United States Mint?—I have to some extent, because in the first estimate that I made, I probably did not make sufficient allowance for the smaller States in South America, the quantities they might have of silver or gold, and I have seen reason to increase the proportion in those tables.

309. I suppose your method of procedure has been to take facts from official sources in certain States where you could get them, and where you could not get them to make a guess, founded on the facts obtained from States from which you could get information?—Yes, and also we have some idea of the amounts produced by the amounts brought to this country from those countries. That is to say, leaving Mexican dollars out of the question for a moment, seven-eighths of the silver produced in Mexico and South America come to this country, I can ascertain from the Board of Trade returns and other means the amount of gold and silver received here from those countries.

310. Do the Board of Trade returns distinguish the country from which the bullion comes?—They include Mexico and South America, with the exception of Brazil, in one amount.

311. Is that a large exception?—No, it is very small comparatively, only about a quarter of a million a year in gold; no silver.

312. (*Mr. Birch.*) There would be no difficulty by the ship's manifest in obtaining the information as to whence it comes?—Oh, no, none whatever; in fact, at the Custom House they have all those figures.

313. (*The Chairman.*) You have not thought it necessary to correct the Board of Trade returns; they are adequately trustworthy?—As much so as any statistics can be. You can never make people declare the exact value. It is sometimes the interest of the shipper and consignee to declare under, and sometimes over, value. You cannot get that with any accuracy. If you are within a million in the year you may think yourself fortunate.

314. I understand your general method of procedure has been this: You have formed an estimate from official sources of what is produced in Mexico and South America; you have corrected that by an entirely different calculation founded on the theory that seven-eighths of what is produced has come to this country; you have further corrected your result by the figures given by the United States Mint, and those arrived at by Dr. Soetbeer, and this column 3 that we have shows the general conclusion at which you have arrived?—That is so.

315. Is that above or below the estimate of Dr. Soetbeer?—Below. In point of fact, Dr. Soetbeer, to a great extent, goes entirely upon the United States Mint report. I think the figures are identical in a great many instances.

316. You think he has not made an independent inquiry in the manner that you have made?—No.

317. So that practically the United States Mint and Dr. Soetbeer do not come to us as two authorities but as one authority?—I think so, except that in Dr. Soetbeer's book there are a great many things they have not in the United States Mint Report. The coinage in the different countries he gives, but the United States Government does not.

318. Then your next column is Russia. What is your source of information with regard to Russia?—To some extent I think that was originally from the United States Mint, but I took means to compare it with other estimates, and I found in some work, which I cannot remember for the moment, what was the total amount of gold raised in Russia in a series of 10 years, 1868 to 1877, and took an average of those 10 years. Then for a more recent date I wrote to the Consul General for Russia, and he sent me the official figures for, I think, two or three years up to 1882, and said that he had no other particulars; he could not give anything later.

319. I see 1883, 1884, and 1885 you have put down 5,000,000*l.*?—An even sum, because I estimated that if it was between 4,500,000*l.* and 5,500,000*l.* we might take the average as being a fair estimate.

320. So that your figures for Russia are partly an estimate founded on an average of years, are partly taken from the United States Mint report, and partly from some information which the Russian Consul General has furnished you?—Yes, that is so.

321. The last column is "other countries." The amount is not very great; could you tell us from what source you obtained it?—To a great extent from Dr. Soetbeer. Of course, with regard to Germany, for instance, we must assume that he is the best authority, and with regard to Austria also, and there is very little gold produced anywhere else except in those two.

322. There is some in India, is there not?—Well, I do not think much of Indian gold mines.

323. You do not think that India has a future as a gold-producing country?—I will not say that exactly. I have not much confidence in them.

324. You do not think that mines known of and already open largely increase the production?—No.

325. Because one witness told us that good authorities anticipate a large increase in the production of gold in India and the Cape?—Yes, I have no doubt about the Cape. I have never been in India, and I have no means of knowing.

326. He was not referring to mines undiscovered, but mines discovered?—It is impossible to say what may be discovered, but one would imagine that they would have known something about them by this time.

327. Have you anything to say as to the production of Queensland?—Queensland has greatly increased of late years, very largely indeed, otherwise the Australian report would be much less than it is, because New South Wales and Victoria have both fallen off in production.

328. I see you have put down the last four years under the head of other countries at a similar round sum, so I suppose it is very conjectural?—Very; at the same time I have no doubt it is within a few hundred thousand pounds either way, and it is impossible to go nearer, I think.

329. Of course, you would admit that there are certain sources of error applying to all those tables, and therefore, to the total result?—Yes.

330. Could you give us any conjecture as to the margin of error that there is likely to be?—Well, supposing we were to say 10 per cent.

331. Would you say 10 per cent. was the outside?—I should think so. I have not considered the subject, but speaking off-hand, I should say the error would not exceed 10 per cent.

332. This is all I want to ask you about the production of precious metals for the moment. Now, can you tell us anything with regard to the consumption?—Yes, I have been making inquiry about that. You are speaking now of consumption for purposes other than coinage?

333. Well, we might classify consumption under the heads of coinage, industrial purposes, wear and tear, and hoarding. Taking coinage first?—Those are official figures.

334. You have given here the coinage in sovereigns in England and Australia. Those, I presume, are taken direct from official sources easily accessible?—Yes.

335. Have you any similar facts with regard to other countries?—In continuation of the coinage columns you have the coinage of all the chief European countries.

336. The United States?—That is from their own reports, from the Mint reports: that must be exact, because it gives the number of pieces.

337. Germany?—That is from the official returns of the German Mint.

338. Russia?—Well, that is not so certain; I think I got those from Dr. Soetbeer, but as a fact you will find that nearly the whole production of the mines of Russia is coined. There has been no export of gold to my knowledge in the last 40 years, I may say, of gold in any other shape than coin.

339. In the column with regard to France I see there are a good many places blank?—No coinage, or so little that it did not come within one-tenth of a million.

340. Belgium the same?—Yes.

341. Italy, are those from official sources?—Yes. Italy I got through Messrs. Hambro and Son.

342. Austria?—Austria, I think I got from Dr. Soetbeer.

343. In these tables of coinage you omit all reference to Mexico and to China?—Well, with regard to Mexico, the reason I did not put them in there is that nearly all their bullion is converted into coin, the Mexican dollar and doubloons, and it goes away in the same form. You may withdraw it altogether—I am speaking of gold now—from the quantity of gold that remains to be coined. I mean to say the total production of Mexico is coined.

344. (*Mr. Birch.*) No bars, or very little indeed?—Every now and again we see a consignment of bars of Mexican silver, but I should say nineteen-twentieths come in the shape of Mexican dollars.

345. Formerly a great deal came from South America in bars?—Not from Mexico; from the West Coast. I have gone away from gold now, as you have asked the question.

346. (*The Chairman.*) I understand you to say that we may simply take the column referring to Mexican production and turn that into coin, for the whole of it is used for coin and none for other purposes?—Yes, very little.

347. Is it the same with regard to South America?—No; from South America we get bars.

348. You have not given us a column stating the production of Mexico as distinguished from South America?—No.

349. And China?—There is no coinage in China.

350. At what price is the silver valued at?—At 5*s.* an oz., for this reason, that if you want to compare with the amounts stated in the previous estimate, many years ago, you must value it in that way. The actual value is much less now, but for comparison I have taken it at 5*s.* an ounce, which the former tables were taken at, or 4*s.* a dollar.

351. I suppose, generally speaking, all the observations you have made with regard to gold apply to silver?—Yes.

352. You stated that your estimate of gold was above that of Dr. Soetbeer?—No, less.

353. Is the silver production also less?—Yes. I think, generally speaking, he over-estimates the production.

354. Can you say off-hand how great the difference is between your two estimates?—No, I should not like to do that.

355. But at all events it does not approach that 10 per cent. of which you spoke just now?—Oh, no.

356. Now you have given us the coinage at any rate of a large part of the world. Do you believe it to be possible to form any estimate of how much of the annual coinage is from metal fresh from the mines, or how much of it is from old coin re-melted?—I do not think it is possible. There is a very large proportion of it from coin re-melted. As you will see, there is really a great deal more coined than is produced every year.

357. And the same is true of silver?—The same is true of silver, not to so great an extent.

358. The annual coinage largely exceeds the annual production?—With regard to silver I am not sure that it is large, because the only coins as a rule that are re-melted are those of the South American States. Mexican dollars are not re-melted as a rule, but very seldom, because they generally command a premium for China.

359. The coinage of gold is nearly one-third more than the production, and the coinage of silver close to one half?—If the figures had been reversed I should have thought it was nearer the mark, but of course I cannot be positive.

360. But that enormous discrepancy you regard as wholly accounted for by re-coinage?—Certainly, and by the knowledge of the fact that we have in this country melted millions of United States gold coin at times; and also millions of sovereigns have been sent to America and re-melted there.

361. But if I desire to find out the actual amount of available coinage in the world, coinage statistics would appear to be nearly useless for that purpose?—Not exactly, but they would not give you any certainty of the amount.

362. But an error or an uncertain element of at least one half in the case of gold?—The uncertainty is not of that extent. Although the production of gold is probably not more than two-thirds the coinage, it does not follow that you would be all that out in your calculation in estimating the quantity of coin.

363. Then could you give us any idea of what correction, in your opinion, we ought to apply to the statistics of coinage to help us to the amount of coin annually added to the world from the mines?—The only way in which you could do that would be to induce the Mints of the different countries to give you the statistics of what they have coined. The United States Mint does that. In their statement they give a yearly report, and they state there how much is from native gold, how much from foreign coin, and how much from their own coin re-melted.

364. But I understand that when gold has been re-melted for the purpose of refining it is impossible to detect its origin?—That is quite so, but as a rule the coin which is re-coined would not be refined first, because its quality is known, and it is simply used in that form.

365. (*Mr. Birch.*) In different countries they use different alloys, do they not?—No, the alloy of gold is always copper, in these days at least.

366. (*The Chairman.*) Then we may conclude from your last answer to me with reference to the conclusions to be drawn from statistics of coinage, that until other Mints follow the example of the United States Mint, and distinguish the sources from which their bullion comes, we really can form no trustworthy conclusions from any statistics as to the amount of re-coinage by the respective Mints?—Nothing very close, certainly not.

367. But can we form any conclusion? Is the error not so enormous owing to re-coinage?—I think so. If you find you have a production of 20,000,000*l.*, and a coinage of 30,000,000*l.*, you may take it that 20,000,000*l.* is from new gold and the remainder from re-coining.

368. So that practically we may almost ignore Mint statistics altogether in this connexion?—In everything except in the fact that they have coined so much money. You must take their figures there; I do not see what else you are to do.

369. And practically we must chiefly rely upon the statistics of production?—I think so.

370. We may assume that all the bullion produced at the mines is turned into coin, except that part of it which is used for industrial purposes?—Sooner or later,

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371. So that the chief corrections we have got to apply to statistics of production are statistics of the use in arts and manufactures. You have some facts to give us about that, have you not?—I have made some inquiries. I have got an estimate made by one of the best authorities, I think, on that subject, with regard to the quantity of gold and silver used in the arts and manufactures in this country; it is about $1\frac{3}{4}$ millions of new gold. When I say new gold, I mean gold that does not come from coin. The probability is that the total amount used may be $2\frac{1}{2}$ millions and that the remainder is from old gold re-melted.

372. But we rather come to the conclusion from answers you previously had given us, that the important thing to know is not how much comes direct from the mines, but how much is used altogether. We decided that Mint statistics were very little use, that what we had to consider was the total production, less the amount used in arts and manufactures; therefore the important figure for us to know is the total amount used in arts and manufactures, whether it is from gold melted down, or bullion direct from the mines?—I think you can only estimate it in this way, that if there is so much new gold, gold produced from bars, and so on, used in arts and manufactures, then there must be a certain proportion of other gold, because we know that there is constantly a re-melting of watch cases and jewellery of all kinds. That is constantly going on, therefore if there is a million and three-quarters of gold from production the probability is that there is at any rate one-third part more from other sources. That would give a total of about 2,200,000*l.* in the United Kingdom.

373. (*Mr. Cohen.*) Where can you get that figure of one and three-quarter millions as a reliable estimate?—Well, from the quantity of gold sold per week.

374. (*The Chairman.*) To the manufacturers?—To all sorts of people, by the people who themselves prepare gold for them. I asked Mr. Sellon, of Johnson, Matthey, & Co., metallurgists and refiners, to assist me in this matter, and after giving some time to the inquiry he said he should judge, by what they did themselves, and what other houses did in the same kind of trade, that the people who prepare gold for the trades, among them all, used about 8,000 ounces of fine gold per week. That is equal to 33,000*l.* per week, or 1,720,000*l.* a year.

375. (*Mr. Birch.*) But what proportion of that is in fine gold, and what in coins?—Nearly the whole is new gold.

376. (*The Chairman.*) Why is it necessary to prepare the gold for the manufacturer?—Because the people who use the gold, small jewellers and so on, only want gold in certain forms and in certain quantities. Then such houses as Johnson, Matthey, & Co. refine the gold coin, or whatever it may be, and prepare the gold in the way required for the different trades. That is to say, the watch trade, for instance, want a quantity of gold of 18 carats or whatever it is; Johnson, Matthey, & Co., and people in their position, prepare the gold and sell it to them in that shape. Then, again, they make fine gold, grain gold, which they sell to people who use it, and who alloy it themselves as they may want.

377. Fine gold is finer than Mint standard?—Yes, it is often as fine as $\frac{998}{1000}$.

378. (*Mr. Birch.*) Is it not a fact that the greater portion of the jewellery in this country is made out of melted coin?—No, it is not a fact.

379. Have you any information on the point?—I put that question to Mr. Sellon, and he said he did not think I should be far wrong if I said it does not exceed 10 per cent. of what is used. The quantity of cut sovereigns used is a question that perhaps you can tell more about than I could if you could be asked. I fully intended, but I have not had time, to ascertain from the Bank of England how many light sovereigns they sell to the trade in the course of the year.

380. (*The Chairman.*) How do you get from your figure of 1,750,000*l.* to the figure 2,500,000*l.*, the total amount used in arts?—Well, I said that possibly one-third added would give the total amount.

381. Would that one-third be coin?—Yes, it might be; it might or it might not. It might be a good deal of coin, but also old jewellery and old watches, &c.

382. I was trying to reconcile this 2,500,000*l.* with 10 per cent. which I understood, according to your authorities, is the amount of coin melted down?—I think I must have been misunderstood.

383. Did you not say 10 per cent.?—What I said was, that the quantity of *coin* would probably not exceed 10 per cent., that is 250,000*l.*, out of the total consumption of 2,500,000*l.*

384. The difference between $1\frac{3}{4}$ and $2\frac{1}{2}$ is a great deal more than 10 per cent. The whole of that would probably be old jewellery and coin?—Yes.

385. (*Mr. Fremantle.*) But have your informants experience of what is done in other parts of England, such as Birmingham?—They supply Birmingham, Sheffield, and nearly everywhere, because, after all, London is the seat of the trade in gold, the centre of it; and nearly all the gold which is received in this country comes to London, and there it is prepared to go abroad or elsewhere.

386. Have they sufficient experience of what the practice of Birmingham is to say that only a very small per-centage of the work done in Birmingham is made from coin?—I think so; no one is likely to know better, at any rate.

387. (*The Chairman.*) I quite understand the sources of information you have in regard to the million and three quarters, but the sources of information that you have to bring you to the total of $2\frac{1}{2}$ millions are very conjectural?—I have none.

388. It is a guess?—That is so. It may be of interest to you in this relation to read this, which I copied out of the United States Mint Report. In the year 1880, the Director of the United States Mint estimates the amount of gold used in arts and manufactures in the United States as 8,634,193 dollars; that is to say 1,700,000*l.*; in 1881, 10,086,723 dollars, that is to say 2,000,000*l.* sterling; in 1883–84 he reckons it at 14,500,000 dollars. I do not quite believe that. That is equal to 2,500,000*l.* in gold. In 1884–85 it amounts to as near as possible 1,000,000*l.*

389. (*Sir T. Farrer.*) There is a rise from 1,700,000*l.* to 2,500,000*l.*, and then a sudden drop to 1,000,000*l.*?—Yes.

390. Do you know from what source the United States Mint got those figures?—They give the actual figures as to the quantities withdrawn from the Mint, which they assume to be for these purposes.

391. But I suppose in the first place they cannot be sure that the gold is to be used in arts and manufactures?—I think they cannot be sure, but they assume that. They give the detail of it.

392. And in the second place, they cannot be sure that the manufacturers do not get gold from other sources, a double source?—They say that no doubt they do, but these are the facts that they know of.

393. It is a fact that the American Mint puts the gold into these merchantable forms in the same way as the refiners do in this country?—Yes.

394. (*The Chairman.*) They give you gold of any purity?—They refine all the gold and make it quite fine. They make some gold into small bars of equal weight. Then, frequently, if people take out a large bar and want to divide it, they take their large bar to the Mint and get small bars of similar weight for it.

395. But will they give 18-carat gold to a watchmaker?—No.

396. Is there any trade in America corresponding to Johnson, Matthey, and Co.?—No doubt there is.

397. And judging by the English analogy, they would provide the American manufacturer with more than half the total amount produced?—No, I think not, because the system is altogether different with regard to the gold at the Mint there. Most people send their gold to be refined to the Mint there. They

do not employ private refiners. I suppose there are private refiners.

398. (*Mr. Fremantle.*) But the great bulk of the refining business, nineteen-twentieths of it, goes to the United States mint, and is there refined?—Yes.

399. (*The Chairman.*) Have you any estimate of the total amount used in arts and manufactures in the United States?—They give these figures as the total amount. In this particular year, 1883–84, when they estimate the amount used as 2½ millions in the Mint report, if I remember right there is not much more than 1½ millions given as being known to be for manufacturing purposes from the Mint.

400. Then, speaking broadly, you would say that the United States and Great Britain use between them only 5,000,000*l.* of gold in arts and manufactures?—Yes.

401. You would say that is a very rough guess; but that probably it is not very much out. What margin of variation would you allow?—I should not like to express an opinion on that point.

402. I do not wish to press you, but would you think that 20 per cent. would be a very unlikely amount of error?—I think it would be very unlikely.

403. We may fairly calculate that the error is less than 20 per cent.?—Yes. I have found a paper which I copied from the report of the Director of the United States Mint some years ago in which the amount used in arts and manufactures from 1874 to 1879 is given, and it averages very nearly 1,000,000*l.* in these years. You see according to what I have said before the amount has greatly increased of late years, but for those six years the amount was under 1,000,000*l.* sterling.

404. (*Mr. Birch.*) But I think you said the last year you mentioned before was 1,000,000*l.*?— Yes, 1884–85.

405. It has come down again?—Yes, but it had been very much larger in the interval. I also read, I am almost certain it was in one of the United States Mint Director's reports, that he estimated the consumption of gold throughout the world at that time at 11,000,000*l.* sterling. It struck me as being a greatly exaggerated figure.

406. (*The Chairman.*) I think Mr. Soetbeer estimates it at 12,500,000*l.* Have you seen that estimate?—No, I had not time to go through the book carefully.

407. (*Mr. Houldsworth.*) Does not the 1,000,000*l.* which you mentioned come after a very large year? What is the figure for the preceding year?—2½ millions.

408. (*The Chairman.*) Have you any figures with regard to the rest of the world—France, Germany?—None whatever.

409. India?—With regard to India there is this to be said, that the whole of the gold which goes into India, except the quantity of gold re-exported, has disappeared from the circulation of the world, that is to say, it is hoarded if you call it so. It is converted into ornaments and kept by the natives and will never appear again as gold in the world except as ornaments unless in the case of a famine; we know that during the last great famine in India we received great quantities of gold from India which were clearly melted from ornaments.

410. Why do you say that the United States estimate, which in this instance is under Dr. Soetbeer's estimate, is too high?—Because I think the probability is that there is much more gold used in this country than in any other country, and if you count on your fingers the countries there are which are likely to spend large amounts in gold ornaments, you would say that certainly England would have pretty well one third part of it. I mean to say, that out of the whole amount of gold used for ornaments, it is extremely probable that England would require at least one-third.

411. You do not base that on population?—No, I base it on the wealth of the country entirely.

412. Is the wealth of the country so very much greater per head than the United States?—I am not so sure about that.

413. (*Sir T. Farrer.*) Is the demand for gold ornament in proportion to the civilization and wealth of a country?—Except in the case of India, yes.

414. (*The Chairman.*) But the population of the United Kingdom is, roughly speaking, 35,000,000; United States, 50,000,000; France, 36,000,000; Germany and Austria, 47,000,000; those are all countries of great wealth and civilization, and the proportion of the English population is very small to them?—Yes, but on the whole in England, taking the amount spent on ornaments, the proportion would be greater than in any of those countries, except India. Besides England manufactures largely for exportation.

415. (*Mr. Cohen.*) The country that consumes most gold in ornaments in proportion to the population is Holland?—I was not aware of that.

416. (*The Chairman.*) You base your view more on a general conjecture than any precise information?—As I said, I have no authority for it at all.

417. Have you looked into the questions at all of loss by wear and tear?—No, that is a matter for bankers, which I am not prepared to enter upon.

418. Have you any remarks to make about the consumption of silver in ornaments?—I have a similar estimate with regard to that; probably 500,000*l.* a year is consumed in manufactures in one way or another in England. A very important part of it now is the conversion of silver into nitrate of silver for photographic purposes.

419. Have you any means of estimating the amount which is used for electro-plating and other manufactures?—Not separately.

420. But you think the figure of 500,000*l.* may be broadly relied on within rather large limits of error?—I had a letter this morning from a gentleman connected with Birmingham, from whom I asked the same question, and he estimates the quantity of silver used in Birmingham as from 300,000*l.* to 350,000*l.* a year. Now Birmingham is supposed to use about one half of all the silver and gold which is used in that manner, which rather confirms the estimate for the United Kingdom. It is a little greater than 500,000*l.*, but still that is near enough.

421. You have no estimates as to other countries except England?—Except the United States. According to the Director of the Mint, during the year 1874–79 there was a much larger proportion of silver ornaments, the figures ran 881,000*l.*, 847,000*l.*, 762,000*l.*, 755,000*l.*, 1,042,000*l.*, 1,195,000*l.* In 1880, 3,464,170 dollars, that is 700,000*l.*; in 1881, about the same amount, 700,000*l.*; in 1883–84, 1,100,000*l.*; in 1884–85, 1,100,000*l.*

422. Have you any explanation of the fact that, while the silver in the United States almost equals the gold used in manufacture, in Great Britain it is only about one-fifth?—No, I have no explanation of that.

423. Have you got any figures, or are there any figures, so far as you know, in existence, showing the stocks of the precious metals existing at different periods in the world?—No, I have not. I think at the time of, or just after the German war, Mr. Seyd read a paper at the Society of Arts, in which he estimated the quantity of silver and gold in the world at various times, but I have not had time to refer to it; but it is reported in the Journal of the Society of Arts of the time.

424. Are there any trustworthy figures showing the stocks of the precious metals existing at different periods, so that they could be compared with the statistics of trade, population, &c.?—No.

425. You think no forecast can be attempted in regard to the future production of the precious metals?—I should think that probably it will go on very much in the same way that it has for the last 20 years, a little more one year and a little less another, but without any very great variation.

426. We have had estimates before us which point to the conclusion that silver is not likely to be produced in large quantities at a lower price than 3*s.* 6*d.* Have you any facts bearing on that?—No, we can

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only say that some of the great mines, the two largest mines in Nevada, have given out altogether. They do not pay their way even at the present price of silver or even a higher one. I refer to the California and another mine, which produced enormous quantities of silver for some years, but which now do not pay their way, so I am told.

427. (*Mr. Cohen.*) Is that owing to the mines having given out?—The mines having given out, and the extraordinary depth they have had to follow the silver.

428. That is quite unconnected with the price of silver. If it went to 6*s.* it would not pay them?—They are carrying on the working of the mine even at a loss, in the hope that they may some day get a profit out of it.

429. It is a region probably rich in undiscovered silver mines?—Yes.

430. You could make no speculative adventure on a conjecture of that kind?—No, sir, I could not. I take it for granted that the most likely place for silver is in the western States of America still.

431. (*Mr. Birch.*) You were referring just now to the statistics of the United States as to the production of the precious metals. I believe those statistics are to be generally relied upon. The Government of the United States take a great deal of trouble to prepare them, much more than our Government?—They take a very great deal of trouble. I am not aware that our Government does at all.

432. You said just now that London was the principal place for the manufacture of jewellery. I thought it was Birmingham?—Not for the manufacture, for the preparation of gold for the manufacturer. Of course there are refiners at Birmingham who do a large business, I have no doubt, and at Sheffield also, but I think the greater part of the gold which goes into the arts and manufactures is gold that goes through London houses.

433. Another statement of yours was that you calculated that 1,700,000*l.* of uncoined gold was used for the arts and manufactures, and only one-fifth of melted coin?—What I said in regard to melted coin was that there was probably not more than 10 per cent. of coin used,—sovereigns I am speaking of now, used by manufacturers,—not more than 10 per cent. of the whole amount, but that probably one-third more than I have stated is got from other sources.

434. One-third of the new gold?—That makes a total of about 2,200,000*l.*

435. (*Sir T. Farrer.*) And did you mean that the 10 per cent., of the total amount was coin?—Yes.

436. (*Mr. Birch.*) That is not in accordance with the information which you wished to obtain?—That is very likely, but it does not always follow that light gold taken from the Bank goes to manufacturers. I fully intended to have made inquiry, and would have been prepared for that, but I have not had time.

437. Then you said the gold sent to India is immediately hoarded, and never sees light except in time of famine. We have heard just now from another witness that small bars of gold are very currently used in the bazaars of India in paying for large amounts. Are you aware of that at all?—I think it is extremely likely, but I do not know it.

438. (*Mr. Cohen.*) Have you any information as to the amount of gold and silver coin in circulation in this country?—There is so good an authority at the table that I do not like to say. I have always been led to believe that it was 100,000,000*l.* in gold and 20,000,000*l.* in silver.

439. But you have no information on the subject,—these figures are what you have seen on the subject?—Nothing.

440. Well, have you any idea in your own mind whether the amount of gold or silver coin in circulation has increased or decreased within the last 10 years?—I should not like to say, because although large amounts of sovereigns have been sent away, yet we have received large amounts of sovereigns from Australia, and I have not had an opportunity of comparing the difference.

441. Have you any information as to whether any large amount of gold is locked up in the form of light gold by the country banks?—I have no information, but I have great certainty about it.

442. Very large amounts of light gold? They do not like to make loss upon it, and therefore they keep it in their own possession. Have you any idea of the amount of that?—No.

443. It could be obtained?—I have no doubt the banks would give the information if they were asked.

444. (*Sir T. Farrer.*) I think you said all the gold sent to India, except such as might circulate in small bars, is either hoarded or turned into ornaments, which comes to the same thing?—With the exception of exports, and in that statement you will find that there is a quantity imported and a quantity exported.

445. The difference is hoarded?—You may call that hoarded safely.

446. And in ornaments it is hoarded?—Yes.

447. That is the case in India. In a civilized country, is it not likely that some ornament hoarding might take place?—It is probable, but I am not aware of any country that would absorb any large amount.

448. It was rather with reference to your suggestion, that England, being a highly civilized and wealthy country, used the largest quantity of gold for purposes other than coinage; but does it not show us that a semi-civilized country may really absorb a larger quantity of gold for purposes other than coinage than a civilized country? Is it not the tendency of the earlier stage of mankind to be fond of using gold for ornament?—Yes, when they get it; but in India the population is so great that, after all, it is an infinitesimal sum per head if you come to put it in that way.

449. I was merely suggesting that as a possible explanation of Dr. Soetbeer's figures or the United States figures?—His figures then would be too small if he included those. I am not sure if the figures there would show it, but I think probably there has been 3,000,000*l.* a year for some years past absorbed by India, so that, added to what I was thinking of for civilized countries, would make it even more than that.

450. (*Mr. Fremantle.*) Is there any means of ascertaining, do you think, with accuracy, or even approximately, what number of sovereigns are used by jewellers and others?—I should doubt the possibility of obtaining that.

451. Therefore you would be prepared to hear that a very large amount of coin is used in addition to the estimate that you gave us just now?—A fair amount; nothing very much, I should think.

452. (*Mr. Barbour.*) Are you aware that there is a considerable use of gold in India for manufacturing purposes, where it is entirely lost, or almost entirely lost?—That is the case in all manufactures, I think; in all ornaments there is a great deal.

453. In ornaments it is partly lost, but it is not altogether lost; but in the manufacture of cloth, gold thread through cloth, that is practically lost?—Yes. But a great deal of that is recovered, ultimately; because I have constantly seen large parcels of old lace and tassels and things of that kind sent to this country, in which there was probably one-tenth part of gold, the rest cotton. That was burned and the gold recovered. I do not think there is any very large amount lost, because it is recovered in that way.

454. (*Mr. Fremantle.*) It would be a question of per-centage, I suppose?—Yes.

455. (*Mr. Barbour.*) But if the holder of the cloth or lace thinks it worth his while to send it back for recovery it is recovered, but if he does not think it worth his while, well, then it is lost altogether?—As long as it remains in use it is not more lost than any other gold kept as hoarded.

456. It is consumed in time?—Well, it is worn out. You cannot say; there may be a certain loss there, but you may depend upon it there are people over

there who go about and buy up these old shawls for the purpose of getting the gold out of them. You may depend upon it they are quite wide enough awake not to actually lose what little gold there may be. It is like the old shops in London, where they will buy anything.

457. I was told by a gentleman in the Punjaub that he attempted to recover the gold from the gold lace used by the native officers in their uniforms, and that he found that it did not pay?—That is possible. It did not pay him, especially if he had to pay for it.

458. (*The Chairman.*) Do you think that much gold passes between this country and other countries which is not taken note of in the general official returns?—I should say not much; there is some.

459. Is there not a certain amount smuggled between layers of silver?—Sometimes a bag of gold is put into a box which contains silver, and is all reported to the Custom House as silver, but I do not think it is very general. *Sir H. Hay.* 25 Nov. 1886.

460. You think it is not a very important proportion?—No, I have known people who have done that kind of thing, but I do not think it is a general thing.

461. (*Mr. Birch.*) I suppose a good deal of gold does pass that is not taken official notice of, I do not mean fraudulently?—A good deal does pass in the passengers' pockets.

462. (*Mr. Barbour.*) For instance, a case in point. I brought 65 sovereigns with me from India the other day which never appeared in any return?—Multiply that by 100,000.

463. (*Mr. Birch.*) A great deal of gold went over to Paris in that way. A person paid his passage there and the simple freight on the gold would have been considerably larger than the passage money?—Oh, I have no doubt that has been the case.

The witness withdrew.

Adjourned till to-morrow.

Third Day.

Friday, 26th November 1886.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. L. L. COHEN, M.P.
SIR T. FARRER.
MR. C. W. FREMANTLE.
MR. W. H. HOULDSWORTH, M.P.
MR. BULLEN SMITH.

MR. GEO. H. MURRAY, *Secretary.*

Mr. ROBERT GIFFEN examined. *Mr. R. Giffen.* 26 Nov. 1886.

464. (*Chairman.*) Mr. Giffen, I think you were examined before the Parliamentary Committee appointed in 1876 to inquire into the depreciation of silver, and that you then gave some evidence upon the question of the production of the precious metals; is that not so?—At that time I gave some evidence with reference to the production of the precious metals, not with reference to the production of silver so much as with reference to the production of gold, and I gave various statements of different kinds on the subject that that Committee was inquiring about.

465. Can you give us any statement which would show the difference between the available information at that time and the available information at the present time?—I think that since that time there has been a great improvement in the state of current information with regard to the subject of the precious metals, and with regard to other matters pertaining to this question. With regard to production, I found, in 1876, when I was about to give evidence, that there was no very good continuous statement with reference to the production of gold in existence. Very few people had taken the trouble to do much regarding it, and there were no statements such as that which Sir Hector Hay, for instance, put before the Commission, in existence generally with reference to the production of gold. There had been various scattered statements of different kinds. I had prepared myself for the "Economist," in 1872, not a statement of the production of gold, but a statement of certain particulars which would give people some idea of what the production would be. I stated quite candidly what the figures were which I gave, and these figures were intended to suggest to people what the general result of an investigation might be, and not themselves to be an estimate of the production of gold. That is all explained in the evidence at the time. The figures which I got I may say were practically official figures with reference to the production in Russia. As regards the United States, the figure which I took was the deposits of gold of domestic production at the United States mints. It was said to be a figure a good deal less than the absolute production, but, at any rate, it was a definite figure, as it was known what amount had been deposited at the mints. Then, with regard to Australia, the figures which I put together were those of the net exports of gold from all the Australian colonies put together, plus the estimated coinage of the Australian colonies. At the beginning of the period the coinage of the Australian colonies, not being legal tender in the United Kingdom, was mostly kept at home, so that the two things seemed to give an idea of what the total production of Australia might be considered to be. And these three things, the production of Russia, the production of the United States, and the production of Australia, being the principal matters, what I supposed in 1872 was that these figures would give some definite facts from which people could form tolerable estimates, there or thereabouts, as to what the production might be. That was the best thing I thought I could do readily in 1872, and I put that with the figures continued before the Committee of 1876. But it was not intended to be an estimate of the general production. Sir Hector Hay put before the Committee an estimate of the production which he had drawn up, I think, in the previous year, with various amendments, and, as far as I know, that was the first

Mr. R. Giffen.
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general estimate, covering the whole period from 1851, of the production of gold and silver. I had only made an attempt relating to gold; Sir Hector Hay's account related both to gold and silver. Since then the information has advanced a good deal, and Mr. Soetbeer published, in 1879, a most elaborate history of the production of the precious metals,—I have got the book here now,—from the beginning of time till the present, in which he investigated the whole subject at all the periods, and especially the modern period, and gave his notion of what the production was from time to time, and especially in the recent years. More lately, Mr. Soetbeer has published another volume, and he has published a second edition of that volume this year, containing materials for the illustration and decision upon the economic relations of the precious metals, and the question of the valuation, in which he continues the estimates of production which he made in 1879, and gives a great many more figures as to prices, as to bank reserves, as to circulation, as to the use of metals in arts, and various other matters—a systematic study of the question. And I have observed also, that there are various books, such as that of Mr. Ottomar Haupt, a well-known authority on the continent, and Mr. Laughlin, who has written a history of bi-metalism, in the United States, besides the reports of the various Commissions which have been sitting, all of which have added greatly to the information upon the subject since 1876.

466. So that you are of opinion that now we are in a very different position for forming an estimate of the production of the precious metals than we were in 1876?—I think, with regard to production the matter is now very greatly simplified in this way. It is still quite true that the three chief places which you have got to consider are those which I have named, Russia, the United States, and Australia, for all of which there are now substantially official accounts.

467. (*Sir T. Farrer.*) That is as regards gold?—With reference to gold; and to some extent it is also true with reference to silver, if you substitute the phrase North America for the United States. With regard to production in Russia you have practically an official figure, and I observe that, although, when it comes to be stated in values and weights there are slight discrepancies, they are only such discrepancies as would arise from people using substantially the same figure to begin with, and its getting translated in different ways into the weights of different countries and the money of different countries. Still, when you get to the bottom of it, it appears to be always nearly the same figure, or a figure almost exactly the same.

468. (*Chairman.*) So that all Russian estimates are based upon Russian official figures?—Practically so. I may add that I have endeavoured to find out the figure in Russian official books, but have not been successful. But in the mint report of the United States you do find these figures as to the weight of gold produced in Russia communicated officially by the Russian Government to the United States minister at St. Petersburgh. Then, with regard to Australia, instead of there being now much difficulty about the matter, you have got in the mint report of Mr. Fremantle an estimate of the production of Australia, based upon the official estimates of the different colonies themselves, and that figure which Mr. Fremantle gives is the figure which Mr. Soetbeer gives, so that it always comes round to the one official figure. I have not had an opportunity of comparing what Sir Hector Hay has done in the figures he gave you yesterday, but I assume that, practically, it would be the same thing. At any rate that figure is in the mint report. Then, with regard to the United States, the official figures have now come to be practically those of the United States Director of the Mint. The Mint authorities in the United States have taken the trouble to go into the subject, and they have made an estimate which has been continued for a great many years, and that is practically the figure which Mr. Soetbeer gives. Sir Hector Hay told you yesterday that his estimate is rather less, and that appears to be the case, not a great deal, I think it amounts to a difference of 10,000,000*l.* sterling between 1851 and the present time, compared with what the official figures are, but I am inclined to think that on the whole the official figure is really the better estimate.

469. You do not lay much stress on the objection that Sir Hector Hay brought to the official figure—that it was the interest of the producers to give an exaggerated estimate to the United States mint of what their mines were producing?—Well, the point which occurred to me when Sir Hector Hay was giving his evidence was that to some extent it is discussed by Mr. Soetbeer himself, the same question. And there is another point with reference to the matter that it is not quite safe to take the figures from Messrs. Wells, Fargo, and Company in respect of one matter, and that is, that of late years especially it has been found that the United States produce gold and silver in one; that is to say, the article produced is both gold and silver. It is called silver there, and would be entered by Messrs. Wells, Fargo, and Company as silver, but when it comes to London it is divided up into two things, part is gold and part is silver, and of late years the United States mint authorities have been taking care to make some allowance for the character of this particular article that is extracted from certain mines, and to credit so much to gold and so much to silver, which is not a thing I believe that would be done by Messrs. Wells, Fargo, and Company, and that is a reason for attaching rather more value to the Government statement than to the correction, I think, which Sir Hector Hay has made upon it.

470. But am I not right in saying that that would make the error the other way?—Sir Hector Hay as regards gold is below the estimate, and it is with reference to gold I am speaking, and that would explain how in some way he might be below, and yet there was no reason for disbelieving the official estimate. At any rate the discrepancy in my view is not at all material in a question like this as regards the United States.

471. It is, perhaps, not worth pressing the point, but is it not true that Sir Hector Hay's estimate of silver was also below the United States mint?—I believe that was the case.

472. And the source of error you have just mentioned ought to have made it bigger?—I am not quite sure about that, because to some extent the taking an account of all that metal that was considered silver and estimating the gold in it would not diminish the silver very much, because the weight of the gold is hardly material, although the value is about equal. The weight of the gold would not make much deduction from the weight of the silver. I may say that, thinking it would be of interest, I have brought with me here the statements of Mr. Soetbeer with reference to production, as it might be convenient to the Commission to have these put in. Of course it would be easy to have them put in from Mr. Soetbeer's book themselves, but I thought it would save trouble, perhaps, if I were to put them in now. One is a statement of the whole production of gold and silver for a long series of years, with the per-centage worked out of the proportion of gold to the proportion of silver; and then the other is a more detailed statement, both in weight and value, of the production of both gold and silver at the present time, and I propose to put in these three statements. (*See* Appendix III.)

473. I see you have given the weight in kilogrammes?—I have put it in exactly as Mr. Soetbeer gives it. Of course it could be translated and put in any form that may be thought desirable for the Commission, but there is no great difficulty in dealing with it, for this reason, that 1,000 kilogrammes are practically equal to an English ton, and that is a very convenient way of translating the one weight into the other.

474. I see no great object in turning the kilogrammes into pounds, or tons, but there might be some convenience in turning the measure of value into English sovereigns?—The mark is as near as possible an English shilling, so there is no great difficulty in working the values in that way.

475. You have now given us an account of the sources of information applying to the three great producing countries; have you anything to say with regard to the sources of information as to the rest of the world?—Well, with reference to the rest of the world, I may say that with regard to Mexico and South America, which Sir Hector Hay referred to yesterday, there was certainly some difference between Sir Hector Hay and Mr. Soetbeer upon that point, but if Mr. Soetbeer's book is looked at I think you will find that he has gone into the matter very carefully indeed, and that he is quite aware of all the matters which Sir Hector Hay mentioned, especially he is aware of the fact that the chief produce of Mexico and South America is brought to the United Kingdom, because he not only mentions the fact, but he gives the actual figures of the imports into the United Kingdom from those countries, and he has evidently taken care to make some investigation of the subject. On the whole, I see no cause to reduce very much the estimate which Mr. Soetbeer has given upon that point. I find, however, that the chief difference between Mr. Soetbeer and Sir Hector Hay, as far as the statement which Sir Hector Hay put before the Committee in 1876 is concerned, arises with reference to what are called other countries, for which, as regards gold, Sir Hector Hay put down at that time the round figure of half a million sterling for many years, and of late years Mr. Soetbeer's figure is two and a half millions sterling. I think, on the whole, that there is some reason to believe that Mr. Soetbeer's estimate has some foundation. He has gone into the production of a great many small countries somewhat minutely, and, at any rate, he explains pretty clearly in his book what he has really done, so that people can form their own judgment about it. But the point I wish to bring out now is, that the main difference between Mr. Soetbeer and Sir Hector Hay arises with reference to this small part of the production; that substantially with reference to Russia and North America and Australia they, practically, not only are in agreement, but to a large extent take the same figures which are official.

476. The rest of the world is more or less conjectural?—I do not know that it is altogether conjectural; if you are careful to look at all the special statements which are made from time to time, it will appear that there is something more than conjecture. Part of the production in question is European production, especially silver. There is a considerable production of silver in Europe, and Mr. Soetbeer has taken the trouble to put all that together most minutely. Then, with reference to gold, a very considerable part of the miscellaneous production is from Africa and outlying countries. The one point which Mr. Soetbeer seems to have omitted, and it is mentioned by himself quite fairly—one of his great merits is, that he is perfectly candid with reference to all the information that he gives—he omits giving any estimate for China which, I believe, is to some extent both a gold producing and a silver producing country, though, of course, no one one knows how much China really produces.

477. And nobody has been able to form even a rough estimate?—I do not think that any attempt at an estimate has been made. If one reads the books of some travellers as I have done, you find reference a great deal to worked out mines of silver and gold in China, and you do not get so much evidence as to what is actually being done. But, I may say, that I have got here a statement with reference to the import and export of gold into and from China. The Chinese official figures are hardly sufficient to enable one to make a statement of this kind, in fact, they are very unsatisfactory on the subject of the imports and exports of bullion. But I have taken the trouble to examine the statistics of the chief countries with which China trades, which I take to be the United Kingdom, France, British India, and the United States, and by working the figures in the reverse way, I have obtained some idea as to the movement of bullion between China and those countries. I am speaking of gold at present. I have taken the trouble to work it out, and, according to this, it would seem that China exports on balance to the chief countries it trades with every year from about 1,000,000*l.* to 2,000,000*l.* sterling of gold. I think it is a little over 1,000,000*l.* sterling on the average for a great many years, going back to about 1864, the China exports of gold.

478. A million a year to all countries?—About 1,000,000*l.* a year, and this is a figure which Mr. Soetbeer does not take account of, as far as I can judge in his estimate of production, so that even if his estimates are an over estimate, there would be this element of China to be taken into account, which may or may not be material. Of course, one cannot tell whether China is exporting out of a very ancient store, or whether it may not get gold from some other country that we have not thought of, but it seems to me that, in fact, China may contribute to the general gold market of the world by a certain export.

479. I suppose an export of an even amount over a large number of years would imply that China produced gold to that amount in excess of her own requirements; it would indicate that?—My own impression is that China does produce gold to some extent. Of course, how much, it would be very difficult to say. I propose to put in the statement for what it is worth. (*See* Appendix.)

480. (*Mr. Barbour.*) Is that prepared from the returns of the United Kingdom, France, and America, or the Chinese returns?—The returns of the United Kingdom, France, British India, and the United States.

481. So that, if there was any large import or export of gold between China and the islands in the Indian Ocean it would not appear there?—It would not appear there, but if there was a net balance coming from the islands in the Indian Ocean, it would be much the same thing, because we do not get any account of that production so far as I know, anywhere else.

482. (*Chairman.*) Then, having carefully considered all Dr. Soetbeer's statements and tables, as a statistician, you are convinced that, on the whole, his estimate is the best we have to go upon, and may in that broad sense be relied on?—I have no doubt that that is so, that you may take it as the work of a very able and sincere statistician, and that, at any rate, if you have any doubt about the matter, he supplies you with almost all the materials that would be necessary to form a judgment of your own. I mean, he is quite candid and sincere, and the book contains most valuable materials, whether you may differ from his judgment or not.

483. And, I suppose, you would be of opinion, that taking all the doubtful elements into consideration, the error in the total result cannot exceed 10 or 15 per cent.?—I do not think it can exceed 10 per cent. with regard to production.

484. Have you any similar remarks to give us with regard to the production of silver?—I have not followed the question of the production of silver at any time as I have followed the question of the production of gold. The reason for my knowing a little more about gold than about silver was the fact that I had to write a great deal about it in 1872, and I prepared a great many tables upon the subject with reference to gold.

485. That would exhaust all that you desire to tell us to-day on the subject of production?—I think, if I might say so, with reference to the evidence which I gave in 1876, there is one point to which I may draw attention, as it was considered a subject of general interest at that time, and has been the subject of a good deal of observation in the writing upon

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the subject. It is this, that from about 1850 to 1870, the proportion of gold produced with reference to silver was abnormally large. If you go back to the earlier part of the century, you find that the proportion of gold to silver was—I really forget what the exact figures were, but that the proportion of gold to silver was about one to three in the early part of the century. That is what it comes to. That is to say, gold was about one third of silver, taking them at the values at which they were represented. Later in the century, that is between 1820 and 1840, the proportion was about one to two in value. The figures are all stated in the evidence which I gave in 1876, and I wish now to use. The proportions also appear in the Table in Mr. Soetbeer's book I have referred to.

486. I see you stated in 1876 that the annual proportion for the whole world at the beginning of the century was very nearly three to one?—Yes, three to one, that is, three of silver to one of gold down to about 1820 and then about two to one down to about 1840. After 1840 for about 10 years the production of the two, according to the current values then, was about equal. After that, however, the production of gold was abnormal for about 20 years. There was a great production of gold, and the figures came to be practically very nearly four of gold to one of silver, and then three of gold to one of silver.

487. (*Mr. Houldsworth.*) What years were those?—From 1851 down to about 1865. But since then the point which I am going to call attention to now is this, that the proportion of the production of gold to the production of silver has diminished as well as the amount of the production of gold, and I wish to mention the figures from that table of Mr. Soetbeer which I have given you. In 1866-70 the weight of gold produced, with reference to the weight of silver produced, was as follows: 12·7 per cent. was the production of gold of the two together in weight. Then in 1871-75 the production of gold was 8·1 per cent. in weight of the two. In 1876-80 it was 6·6 per cent., and in 1881-85 it was 5 per cent. only of the total weight of gold and silver produced. And, of course, the effect of that is that when you come to estimate them in values, the proportion of gold to silver has also fallen back, and they are now practically, according to Mr. Soetbeer's table, about equal again, but that, of course, is at the lower value of silver which he gives.

488. (*Chairman.*) They have reverted, in fact, to the condition in which they were between the years 1841-1850?—That is so.

489. Turning now from the question of production to the question of the employment of the precious metals, could you give us broadly your view of the increased demand which has been made for gold?—The increased demand for gold as compared with what it was just before 1872 appears to me to have consisted first of all of the German demand, next of the American demand, then a certain demand for Holland, and, perhaps, I should add along with that for the Scandinavian countries as well, and then a demand for Italy, all of which, put together, I have roughly estimated as about 200,000,000*l.* sterling, and it would be, perhaps, not very difficult to give some detail with reference to each. With reference to Germany then, the actual efflux of gold to Germany commenced in the year 1871. Germany began to draw in gold with reference to its coinage, and eventually it coined about 96,000,000*l.* sterling in gold, of which about 5,000,000*l.* consisted of recoinage of gold which had been in existence in Germany before that. I may state that there was a very curious discrepancy between the estimates of the gold coinage of Germany, and what in fact the coinage of Germany turned out to be, because the estimate had been that the coinage of gold for Germany before 1871 had been something like 27,000,000*l.* sterling, but when the gold was withdrawn and demonetised, the actual amount that was withdrawn and demonetised was under 5,000,000*l.* sterling. So that of the whole of the 96,000,000*l.* of gold which has been coined in Germany, you may say that upwards of 90,000,000*l.* was taken from other countries.

490. What was the cause of the large discrepancy of which you speak?—I do not say that it is exactly a discrepancy, but the fact was that it was known from mint records and otherwise what the coinage of the different States in Germany in gold had been, and that figure was something over 26,000,000*l.* sterling, but in point of fact, when you came to withdraw that coinage and to demonetise it, you only found that you had to operate upon 5,000,000*l.* sterling, which seems to show that the amount that has actually been coined is very little indication of what coin may really be in use in circulation or hoarded in a country.

491. That is a fact that was clearly shown, also by the circumstance that the amount of coinage greatly exceeds the amount of production?—All that is also shown generally, but I thought I would call attention to that particular point in passing, as it is not often that there are such opportunities of observing as there was in this case, when all the money was withdrawn and demonetised.

492. Do you think it would be fair to take that as a guide to what happens in other countries, and to divide the total coinage by five, in order to ascertain the actual stock roughly?—Oh, I cannot say that at all; this is merely a particular instance.

493. (*Mr. Fremantle.*) Was there any special reason in Germany why the amount actually withdrawn was so small?—I think one reason perhaps might be, that gold was not the standard money of Germany before; that silver was the standard money, and gold was what was called monetary merchandise more than standard money itself.

494. (*Mr. Birch.*) The exchanges would probably have been against Germany, and thus the gold would have been exported?—That might be so.

495. (*Mr. Barbour.*) Was there a fixed ratio between gold and silver?—It is very difficult to say exactly, there were so many different States in Germany; but I think there was no fixed ratio. Silver was the standard money.

496. And the ratio between silver and gold varied?—And the ratio varied according to the market rate. I am not quite clear what was the market rate, but I know that people who were considered to be acquainted with the facts, always spoke of France as a bi-metallic country, and of Germany as a silver country.

497. (*Chairman.*) We may take it that 90,000,000*l.* is the amount which Germany has taken on balance out of other countries since 1871?—I may go on with reference to that, and say, that in point of fact Germany cannot be considered as having withdrawn on balance from other countries so large a sum as 90,000,000*l.* sterling, because within three years after that coinage in Germany commenced, that is, before 1875, it had begun to be noticed that a certain amount of new gold was being exported.

498. Practically, then about 80,000,000*l.* sterling in all would be about what the demand for Germany has been for new gold from other countries, not necessarily, of course, altogether for coinage, but that is the amount which Germany has taken on balance out of other countries since 1871?—Yes; that is about the figure which is arrived at. I may say that the demand altogether was not merely in order to enable Germany to substitute gold for silver in its coinage; but that there was a great banking reform going on at the same time, and part of that reform consisted in the extinction of notes of small denominations. The reform took place in the year 1875, and at the beginning of that year it was estimated that something like 27,000,000*l.* sterling of notes of small denominations, under 100 marks that is, were in circulation, and these were all extinguished in the course of the year 1875, and my own calculation is that from 10,000,000*l.* to 20,000,000*l.* sterling of those notes must have been replaced by coin. The bank note circulation in Germany has

never been quite so high as it was just before 1875. It was then about 70,000,000*l.* sterling, and I think, even now, it is about 55,000,000*l.* sterling, and it has been a good deal less.

499. (*Sir T. Farrer.*) Were they all replaced by gold, or some by silver; some of them were very small?—Of course it is impossible to say whether they were all replaced by gold or by silver, but I looked into that point a little also, and the notes for 15*s.* and under were something less than 10,000,000*l.* sterling. The next denomination of notes was about 30*s.* sterling, and I should say that a considerable part of the notes extinguished must have been replaced by gold and not by silver, owing to the amounts for which they existed. At any rate, I think I may give the reference to the figures. They are in *The Economist* of the 20th February 1875. You will find a statement of the character of that 27,000,000*l.* which I have told you about, what the different denominations were. I remember writing about it myself at the time, and it would have some effect in making a demand for gold, and not simply for silver.

500. And you estimate that demand at about 20,000,000*l.*?—From 10,000,000*l.* to 20,000,000*l.* Of course it added to the general demand for Germany. It was not merely the substitution of gold for silver in Germany, but the change with reference to the paper as well.

501. (*Mr. Birch.*) With regard to that 80,000,000*l.* of gold that was coined, have you any information as to what was re-exported of the new coinage. At one time we held a little, and there was a good deal at the Bank of France?—I could go into detail if it was required. I believe the German figures on this head are not quite satisfactory as to imports and exports, partly because the German empire had some trouble in establishing a department of statistics for imports and exports after the empire was formed, and it is not, I think, till about 1879 that the statistics of imports and exports became tolerably good. But there is no doubt a good deal was exported, and that was just one of the points I was mentioning. But I can only follow on this head the estimates of people like Mr. Soetbeer who have looked into the subject, and you will find a great deal about it in these books of his that I have referred you to.

502. (*Chairman.*) Then you would summarise the demand of Germany in this way, that she engaged in two reforms at the same time, both of which required gold, one a monetary reform, another a banking reform; that from the total amount of gold required for those two purposes we should deduct in the first place the gold recoined, amounting to about 5,000,000*l.*, and then the gold that was exported between 1872 and 1875?—Between 1872 and 1885; that goes down to the present time.

503. Making those two allowances, your general conclusion is that the demand that Germany made upon the gold stores of the world reached about 80,000,000*l.*?—About 80,000,000*l.* in round figures is the sum which I have arrived at.

504. Then could you give us any particulars with regard to the demand of the United States?—Then with regard to the United States I have looked into that subject at different times, and the conclusion to which I have come is, that starting from the year 1875, which was about the time that the law for resuming specie payments in the United States was passed, down to the present time, the United States has taken gold to the extent in round figures I should calculate of about 100,000,000*l.* sterling. This has constituted an entirely new demand as compared with anything that was in existence before that. And I may say that there seems to be practically little doubt about this figure, and anyone could easily follow up the calculation in this way: If you take the production of the United States since the date I mentioned, since 1875, you find that it comes to about 75,000,000*l.* sterling, and then you find when you compare the imports and exports of gold bullion in the United States, that on balance since that date the United States has imported from other countries from 30,000,000*l.* to 35,000,000*l.* sterling, or rather more. And these two things together come to about exactly 108,000,000*l.* sterling, which the United States would appear to have absorbed in that time. That is one mode of calculating. Then I observe that there are various estimates by the United States authorities themselves, the Mint authorities and others, with special reference to coin, and some of these would seem to show that about 100,000,000*l.* sterling has been added to the coin of the United States. I prefer myself to take the simple mode of calculating what the production has been in that time, and the balance of imports and exports, and that shows that the United States has absorbed certainly about 105,000,000*l.* to 110,000,000*l.* sterling, and this was an entirely new demand.

505. (*Sir T. Farrer.*) Had not some of that gold been previously exported from the United States at the time of their war and the suspension of specie payments?—That is quite possible, but I am speaking with reference to a new demand as compared with the period just immediately before. And I may say that from 1862 or thereabouts down to 1875 the balance of imports and exports of the United States shows that the United States exported in that time, on balance I am speaking of, almost exactly the whole amount of its production. There is no record as far as one can judge of any part of the production of that period having been retained in the United States. There is apparently an equal balance between the imports and exports, so that from 1875 onwards you have the United States, which previously sent away all the gold it produced, not only taking all the gold it produced, but taking something from the outside world as well. And I may say, as a matter of recollection, as a thing that was perfectly well known, that in several years after 1875, viz., 1877 and 1878, and 1879, it was quite well known in London that America was taking large amounts of gold from both London and Paris. It was a familiar and a very prominent fact in the money market at that time.

506. (*Chairman.*) Your method of calculation would be partly invalidated, would it not, by any use that was made of the precious metals for purposes other than coinage in the United States?—Yes; and that is a point which seems to me of great importance in reference to this subject. It is very easy to calculate in the way that I have done what the demand for the United States has been in that time, but then I have tried to follow it up in this way,—where is the gold which has gone to the United States? This is comparatively a new figure which we are dealing with, a new sum, and we know with tolerable certainty that the United States has consumed this amount in some form or other, but when you come to look into the figures again all that you can see of it, as far as I can judge, is about 50,000,000*l.* sterling. You can see that the reserves in the United States Treasury and in the chief banks in the United States, the National banks, have increased about 50,000,000*l.* sterling. Before that they were about 25,000,000*l.* or 27,000,000*l.* sterling, and now they are about 75,000,000*l.* sterling, showing an absorption of 50,000,000*l.*, but where the other 50,000,000*l.* have gone to, I confess I am quite unable to give you any idea. If you go to the United States—I do not know if Sir Thomas Farrer can tell you anything about it, but I was there two or three years ago, and found there was no gold coin in circulation at all.

507. (*Sir T. Farrer.*) I had one eagle given me. I was in a shop in New York, and I had it given me in change the last day I was there?—I had the same experience; I only had one gold piece all the time I was in the United States, and as far as I could see, in the eastern part of the United States there was no gold in circulation, so that if it was not in the banks, where was it? Then I find that there are various estimates by the authorities in the United States as to what has been consumed in the arts, and one gentleman, a Mr. Mühlemann, of the United States Treasury, makes an

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estimate in the appendix to this report of the Secretary to the Treasury to the effect that about 30,000,000*l.* sterling had been consumed in the arts between 1873 and 1885. I think in about 12 years his exact figure is about 36,000,000*l.* sterling, or as near as possible 3,000,000*l.* sterling per annum. And he says that that accounts for 30,000,000*l.* sterling of the difference, and that the whole amount of gold in circulation in the United States as distinguished from what is in the hands of the Treasury and the banks is about 20,000,000*l.* sterling; but whether it is 20,000,000*l.* sterling, or any other figure, I confess I am quite unable to say.

508. (*Mr. Houldsworth.*) There is one point I do not feel quite satisfied about. I think you stated that before 1875 the exports were 75,000,000*l.* and the imports 75,000,000*l.*?—No; what I stated was, I think, that before 1875 the exports on balance from the United States were equal to the production at home.

509. Well, the production was 75,000,000*l.*?—At that time it would be about 75,000,000*l.*

510. And then 75,000,000*l.* was exported, I understand?—That is the total amount for the years from about 1862 to 1874 or 1875.

511. (*Chairman*) So that, upon the whole, you base your view of the demands which America has made upon the gold of the world, rather upon a study of the balance of export and import, than upon any consideration of the actual amount of coinage in the country, or the balance lying at the banks or in the Treasury?—I may say that it is based upon that consideration mainly, but I have also looked into the statements of the different authorities in the United States, because they give different calculations, and that is the result of it. There is no substantial difference as to the fact of that amount having been absorbed in some way, but then some of the authorities would consider that a great deal of it has practically been taken for the arts, and I see no sufficient evidence of that myself, and yet I am not able to say precisely what has become of the whole amount which seems to have been taken by the United States.

512. Do you know whether the estimates made by authorities of the mint of America are based, like your own, upon a comparison of exports and imports?—There are two estimates substantially as far as I can judge; one is based upon a statement with reference to coin only, and that is, they show the coinage of the United States mint for the period that I have been naming; they begin there in 1873 Then they deduct all the recoinage in that time; then they deal with the balance of imports and exports of coin only, and that shows an increase of coin amounting to about 90,000,000*l.* sterling when they deal with the subject in that way. But that of course would still be subject to the observation that a part of that coin may have been used in the arts. Still when you deal with coin alone, it seems to show an increase of about 90,000,000*l.* sterling. When you deal with coin and bullion together as I have done, it seems to show an increase of about 15,000,000*l.* to 20,000,000*l.* sterling more.

513. (*Sir T. Farrer.*) Is there any estimate in these reports of the quantity of gold which is used in California?—Not specially, but Mr. Mühlemann, of the Treasury, seems to estimate the total amount in circulation in the country outside of the banks as about 20,000,000*l.* sterling.

514. (*Chairman.*) But how does he get at that estimate?—How he gets it I cannot tell, because he does not go into detail. But still there is that difficulty that you do not see the coin in circulation.

515. But, on the whole, you think that all these lines of inquiry point to a sort of average of 100,000,000*l.*; that we may take that without much risk of error as the demand for the United States?—There is no doubt about that. That is a new demand.

516. (*Sir T. Farrer.*) Is there any reason why there should not have been a greater demand for the arts after the resumption of specie payments than before?—I think not after the resumption of specie payments, but I could quite imagine that at the time the war was going on, a time of great pressure, it would have been almost considered bad taste to wear ornaments very much, or anything of that kind, and that really there was a large suspension of the use of the precious metals in the arts from about 1862 down to about 1870. I should think that is extremely likely, and you may have had a larger use of the metal in the arts since that time.

517. (*Chairman.*) Then Holland?—Then with regard to Holland, that is not a very material matter, because Holland is not a large country, and is not a large consumer of the precious metals in the form of coin in any way. But the change in Holland was to the effect that the free coinage of silver was suspended, and I would not be able to say whether in point of fact, since then, Holland has formally adopted a gold standard or not.

518. Practically, it has done so?—The practical effect of what it has done is perhaps the same, except that as the old coinage of silver is not withdrawn, but circulates at full value at the old ratio, less gold is used than if there had been a more complete substitution of gold for silver, as in Germany. The Scandinavian countries have done something of the same kind, but I have not formed any estimate of the exact sum all these countries have taken, because it is not a very large amount altogether.

519. Do you include Java in Holland?—Java would be included, because Java and Holland have exactly the same currency.

520. (*Mr. Barbour.*) Gold is freely coined in Holland, I think. It would be coined if brought to the Mint?—Yes, but not silver.

521. Java has a gold standard?—Yes, but not gold currency much.

522. (*Chairman.*) Then Italy is the last country?—Italy had comparatively a recent operation, and Italy raised a loan of 16,000,000*l.* sterling to enable her to resume specie payments. Practically the whole of that amount, within the last two or three years, was taken to Italy, and has not come back, at least not to any material extent.

523. (*Mr. Birch.*) I think the loan was 20,000,000*l.*, not 16,000,000*l.*?—I think, if my memory serves me right, it was 16,000,000*l.* effective. It may have been 20,000,000*l.* nominal. In any case the gold that was taken was 16,000,000*l.* sterling. [I find, according to Burdett's "Official Intelligence," that the issues of Rentes at the time in question were about 29,000,000*l.* nominal, the issue price of the first half being 90, and of the second half 88, but the effective amount required to purchase gold for resuming specie payments was that here stated.]

524. (*Chairman.*) For the purpose of our inquiry, it would be important, would it not, to distinguish those cases in which the new demand for gold has been as a substitute for silver, and any cases where the new demand for gold has been as a substitute for paper?—I am not quite clear that it would be of much importance for what you are doing now.

525. Would it not on this ground, that where the new gold has been substituted for silver it has not only increased the demand for gold, but diminished the demand for silver, whereas in these cases where the gold was required as a substitute for paper that second result has not followed?—I think we shall come to that presently, when we deal with silver, but I may say that, as far as I can judge, there has not been as yet a great diminution of the actual demand for silver, as compared with the period before the fall in silver commenced, for special reasons. I may mention, as one of them, that part of the reform in the United States was the abolition of fractional paper currency, which took place about the same time as the resumption of specie payments, and on that head alone, apart from the question of the Bland dollars which the United States has been coining, the United States seem to have coined about 10,000,000*l.* sterling of silver instead of fractional currency.

526. In addition to the Bland dollars?—In addition, so I do not think the point is so very material as to whether the new demand for gold has arisen through its being a substitute for silver or in some other way.

527. (*Mr. Birch.*) Have you any information with regard to Spain. Spain has parted with a large quantity of gold and taken silver in its place?—The question would be whether that is a new demand, whether Spain has not always been practically a gold standard country, at least for a great many years.

528. But the gold it has sent away has been replaced by silver; that would make a new demand for it?—Some demand. I have not got the figures.

529. (*Chairman.*) The demands you have been describing to us are all new. Do they take the place of any demands of an analogous character existing before 1861?—I think it is important to draw attention to the point, that although they are new as compared with the period just before 1871; yet, if we were to go further back, we should find that the demand for gold for France was really an abnormal demand of a somewhat similar kind. That is to say, between 1850 and 1865, France took an immense amount of gold, and that of course was an extraordinary demand. I am merely wishing to draw attention to the point, that I am making my comparison with the period just before 1871, when that demand for gold in France had ceased.

530. Could you give us any idea of the magnitude of the demand for gold in France?—That of course is a very familiar fact, which you will find in many of the statements. My impression is, that about 220,000,000*l.* sterling was coined in the period stated, but of course that is a figure which you will get very easily in the Blue Books.

531. Over a period of 15 years?—Over a period of about 15 years, and curiously enough, although that to a large extent arose through France having substituted gold for silver in its money, owing to the bi-metallic arrangement, yet the amount of silver which France sent away was very much less than that. I think it was only about 75,000,000*l.* sterling.

532. Then the conclusion that you would adopt is, that the amount of gold that was required was not simply as a substitute for silver, but also to fill up the demand for coinage existing in the country itself?—I think that has been the case to some extent all through these years; that there has been a growing demand for coinage to some extent.

533. Through increase of population and wealth?—Through increase of population and wealth, and that when a country has made a change, you are not to estimate the demand that it is likely to make by what would have to be substituted, but by the new circumstances altogether.

534. (*Mr. Birch.*) And it would be also to replace paper?—To replace paper to some extent, although how far any paper has actually been displaced, except in Germany, would be a very difficult question to decide. I do not think that, in point of fact, there has been much diminution of paper in America until now. Now there is beginning to be some diminution of the bank note circulation, and its place is being taken by gold, and to some extent by silver certificates, but I do not think you can say that since 1873 there has been any material diminution of the paper circulation in the United States though it is less of an uncovered circulation than it was.

535. Silver certificates do not differ except in name from ordinary bank notes, I take it from an economic point of view?—From an economic point of view, both gold and silver certificates are simply bank notes, with the important difference that they are absolutely represented in the case of gold by a full equivalent, and in the case of silver, at the present market price, not by a full equivalent.

536. (*Sir T. Farrer.*) And is there not a further difference that the person holding a silver certificate cannot demand gold, but only silver?—That would be a material difference I think in point of law, and yet not so material as things stand at present in point of economic effect.

537. But supposing that gold left the country, then it would be material?—Then it might become material in effect.

538. You have referred to the previous state of things in France. Is it not also the case that the demand in the United States was a demand which had been intermittent, rather than an absolutely new demand? The United States had been a gold country before the war?—That would be so in respect of the quality of the demand, but I think when we take into consideration the fact that the United States stopped specie payments in 1860, and did not resume till 1875, an interval of 15 years, in which they had increased enormously in population and wealth, the quantity of the demand in that time had become entirely different.

539. (*Mr. Barbour.*) And before they stopped cash payment they were bi-metallic, were they not?—I believe they were not bi-metallic, they were practically a gold country.

540. But they were bi-metallic at a ratio of 1 to 16?—A ratio existed.

541. Nobody bought silver at the ratio?—No.

542. They were legally bi-metallic, but practically gold since 1834?—Yes.

543. (*Chairman.*) But there was no alteration of the law in 1834 was there?—There was an alteration. They altered the ratio then from 15 to 1 to 16 to 1.

544. The demands on the gold productive powers of the world which you have described to us, so far, have been temporary in their character, that is to say, they have been required to make a great change in the currency?—To a very large extent they have been, and I have thought it might be very important if one could distinguish what has become what one would call the normal demand from what was absolutely necessary to effect the transition, but I am afraid that we are yet too near the transition period to be able to form an estimate upon this head. I should say that, as regards the United States, we might consider that since 1880 all the demand that has existed has been of the character of a normal demand, but for this reason, that the United States have had so much trouble with the artificial character of the coinage laws, that I think they have had to make special demands for gold more than perhaps they otherwise would have made, to guard against accidents, and that one can hardly say even now what the normal demand for the United States is.

545. (*Sir T. Farrer.*) May there not be another element of change there, arising from the possibility that if the present bank note circulation diminishes in consequence of the diminution of the United States debt, which is the foundation for it, it may be necessary to issue more notes, and to have further gold as a reserve against these notes?—That is part of the transitional state of affairs that I am referring to, and we do not know what the legislation will be with reference to these points.

546. (*Chairman.*) Is it not possible to form an estimate of what the normal demand of the gold circulation of the United Kingdom is?—I think it is extremely difficult, if it can be done at all.

547. If it could be done, might one not apply the law so discovered with regard to the United Kingdom without any very great risk of error to other civilised countries?—Well, I think it cannot be done very satisfactorily for this reason, that the circumstances are always changing, and, I may say, that in these papers that I have referred to already, and which I prepared in 1872, I made some attempt to discover what amount had been going into circulation in the United Kingdom. That is to say, I took into account the coinage, the re-coinage, the surplus of exports over imports of British coin, and tried to arrive at the sum, and the sum I arrived at in that time was about 2,000,000*l.* sterling per annum for the 14 years ending with 1872 or 1871, 2,000,000*l.* sterling per annum.

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548. Have you any reason to distrust that estimate?—I do not know that I have any reason to distrust that, or to have confidence in it, except that people can form their own judgment as to whether the mode described is a proper mode of doing the sum, and judge what the result will be. I have had no means of checking it in any way from any other sources, if that is what you mean. It seems to me the best way to work out the sum, but there are absolutely no means, as far as I know, of checking it in any other way that would be a real check. That was the figure which I arrived at then. But I could not say that that figure, even if good for the United Kingdom some years ago, would represent the normal demand in recent years or give an idea of what the normal demand in other civilised countries would be. The circumstances are so different.

549. (*Mr. Birch.*) I should like to ask whether you had taken into consideration the coinage of Australia?—I took that into consideration in this way, that I first took the figure of coinage; I deducted the re-coinage from that; then I took the figure of the surplus imports or exports, as the case might be, of British gold coin only, and I arrived at a sum which seemed to be the amount going into circulation in the United Kingdom exclusively.

550. (*Mr. Fremantle.*) Over what number of years was that?—About 14 years from 1858 down to the end of 1871, and you will find all the particulars of it in the series of articles I wrote in *The Economist* in 1872.

551. (*Mr. Birch.*) One very important element to take into consideration, and one very difficult for you to follow, is this: Brazil and Portugal, and other countries use our gold coin?—That all appeared in the estimate which I made, because that appeared in connection with the balance of imports and exports of British gold coin.

552. I want to try another point. You cannot calculate what is the total amount, supposing Portugal and Brazil to become very flourishing. You cannot rely on the calculations you made 10 or 15 years ago. They will not serve now. What amount of that gold may remain as circulating in those countries?—The calculation I made, the one I have been referring to, does not bear on that point at all; it simply bears on what went into consumption in the United Kingdom, but I may say that the figures which I prepared altogether did show what went on balance to Portugal and those countries.

553. (*Mr. Fremantle.*) Did you take account of imports as well as exports?—Both. Imports as well as exports.

554. (*Chairman.*) I suppose the normal demand of any country for coinage consists in the amount required to make up for wear and tear, the amount required for increased coinage as wealth and population increased, less the amount saved by checks, bills of exchange, and other similar contrivances, which may come into use in the period?—That would be so, but, of course, there are so many elements of doubt that you cannot be sure that what has happened in the last 10 years, is what ought to happen in the next 10; there are so many elements of change.

555. Could not you arrive at some approximate estimate on the lines that I suggested? We know what the wear and tear is, do we not, or at all events we have a conjecture as to the amount of wear and tear?—The wear and tear is very inconsiderable, and does not make much difference in the subject.

556. In a country like England the banking facilities and other methods of economising coin have not increased very much within the last 20 years, have they?—I do not think that, effectively, any changes which have taken place in that way would have much bearing on this question.

557. So that all the additional coin that we have required must have been to make up for the small amount of wear and tear, and for the increase of wealth and population?—And also to make up for any void that may have been caused in the coinage through what may have been taken for use in the arts which we do not know about. And then, of course, I may say that with reference to that calculation it is subject to the great difficulty that when you come to reason finely about it, to aim at minute accuracy, and apparently something like minute accuracy is necessary, you have not the means necessary for a sure result. The figures you arrive at are so small compared to the large figures of imports and exports from which you may make your calculation that the margin of uncertainty with regard to these imports and exports themselves may be sufficient to destroy a good deal the value of the calculation unless you can check it in some other way.

558. (*Mr. Birch.*) I think you said that there had been no material alteration in the banking facilities. Don't you think that cheques are very much more in use now than they were some 10 or 15 years ago, and are applied to much smaller amounts; and they take the place of gold?—One may admit all that, but the question is one of degree. It seems to me that cheques would compete more with bank notes than with gold, but that is one of the points one would like information about, instead of theorising about it.

559. Formerly nobody drew a cheque under *5l.*, but now people think nothing of drawing a cheque for *1l.* It is constantly done?—I have given some attention to that, and, I think, if it is considered for a little while, what the extent of that change might be, and that it affects the habits chiefly of a small class by comparison with the rest of the country, then I do not know how far you would make a saving in coin by the difference in the extent to which cheques have been used in that way, compared with what was the case before. I think one might say, at the same time, with reference to that, that you have had coin economised by means of postal notes, and things of that kind, perhaps, to some extent; but, looking to the country generally, and considering how much wealth has increased in the same time, it would seem to me very doubtful whether there has been much practical diminution in the necessity for using coin in the interval as compared with the general extent to which coin was used before.

560. (*Mr. Fremantle.*) It is a fact, is it not, that the gold coinage during the last four years has been very small in comparison with former years?—I think one of the results of the inquiry which I made in 1872 is to show that if we look at what happened up to that time for the 14 years before, and what has happened in the 15 years since, we can say that, taking the same figures for our information, the amount of coin going into circulation has been less since 1872 than it was before that, and in the last five years it would almost seem as if no amount has been going into circulation at all. In the past year it has been coming out of circulation.

561. (*Sir T. Farrer.*) Notwithstanding the great increase in wealth and population, and commerce?—Notwithstanding all that has happened.

562. (*Chairman.*) But would not that point conclusively to the fact that there must have been some substitution for gold in the way of cheques?—Not conclusively. There may have been other changes. I would not like to go into the question of what the explanation may be, but there is undoubtedly the fact that, as far as one can judge from the figures, there has been a change since 1872 as compared with the period just before that.

563. (*Mr. Houldsworth.*) Have you made a similar calculation since 1872 to that which you did before 1872?—I am sorry to say, it shows how one forgets, that when I made up some tables for the Commission on Trade, I thought I was going to arrive at the same thing, and gave directions for its being done; but I found that one important point had slipped out, and that was that I did not allow for the re-coinage, and if you look at the table for the United Kingdom which your Secretary has been good enough to prepare for you, and which continues these tables which I prepared for the Trade Depression Commis-

sion, you will find that the first five columns of it relate to the amount of gold coined, the net imports or exports of British gold coin, and the amount coined *plus* the excess of imports or *minus* the excess of exports. These are substantially the same figures that I used before 1872, but the re-coinage is omitted. Still allowing about 1,000,000*l.* annually for the re-coinage, one can make a comparison with the period before 1872 and the period since. You will find that in 1860-64 the balance that appeared to be going into circulation, but not deducting the re-coinage as we ought to do, was 2,300,000*l.*; in 1865-69 it was 2,800,000*l.*

564. (*Mr. Birch.*) Out of the Mint?—No, from all sources. In 1870-74 it was 2,760,000*l.* In 1875-79 the figure is 1,608,000*l.*, and in 1880-84 it is 871,000*l.*, so that you have practically before 1872, on these figures, very nearly 3,000,000*l.* sterling, or deducting for re-coinage, you would get the same figure that I gave before, about 2,000,000*l.* sterling, but since 1872 the net sum annually added to the coinage has been much less, and lately it has been a minus quantity.

565. (*Mr. Houldsworth.*) If there was 1,000,000*l.* of re-coinage, and you deduct that from the 2,760,000*l.* of 1870-74, the result is about 1,760,000*l.*?—It becomes something less than 2,000,000*l.* Then in the following five years it would become something less than 1,000,000*l.*, about 600,000*l.* only, and in the five years ending 1884 it would be less than nothing.

566. (*Chairman.*) These figures give you the coinage from all sources, don't they?—The coinage from all sources. I take the coinage of the United Kingdom, and add or deduct the excess of imports or exports of British gold coin, and that gives you what comes into circulation from all sources in the United Kingdom.

567. Do you think we could find some method by which we could estimate the normal increase of the demand for gold, and the abnormal demand consequent on the fact that certain countries have adopted a gold standard?—I think there is a difficulty with any country, even with regard to the United Kingdom; but I think as regards the new countries I have been speaking of, the United States especially, that it is impossible, for another reason, that there has not been time to show what the normal demand is.

568. (*Mr. Cohen.*) Mr. Sauerbeck professes to give it in his paper. He professes to show the increased demand for gold arising solely from those countries that have introduced gold, at page 4?—I have read Mr. Sauerbeck's paper; but this is a subject with which I have been very familiar, and I do not think Mr. Sauerbeck addresses himself to this special point. The subject is most difficult and you cannot easily get round the difficulties.

569. (*Mr. Barbour.*) Do you think there is a normal demand for the metal as standard?—Strictly speaking, there is a demand which you might say would be necessary to maintain prices and wages in a country in equilibrium, all other things remaining unchanged; but whether it would be possible to obtain, practically, an estimate of what that demand is, is statistically a very difficult question. That is, as I understand, the point which we have been discussing, that theoretically there would be in the nature of things such a demand, but whether you can identify it in the concrete with any particular figure is a very different question.

570. And of course the amount that any country takes in any particular year will be affected by the demand in other countries?—It would necessarily be affected by the demand in other countries; but then, if you speak of it theoretically, you assume that the demand in other countries is also in a normal condition, and this would enable you to say what the normal demand in a particular country is. But of course in point of fact, and this is the real difficulty of the subject, all things are changing, not only in our country but in every country, and that makes it difficult to find a concrete figure that you can identify with your theoretical idea.

571. (*Sir T. Farrer.*) And your assumption is that the demand is based upon the hypothesis that prices, wages, and so on remain in a state of equilibrium?—And that population remains in equilibrium, or at least that you must allow for a constant increase of population.

572. (*Chairman.*) Then there has been, as you are aware, a large demand for gold for India since 1871. Do you regard that as of importance?—There is no doubt of its importance in many ways, but when I was considering the subject I did not consider it so specially important with reference to this particular point, because the demand for India has not changed in character as I understand; it is more a question of degree. The kind of demand for India was in existence before 1871, as well as since then, although there is no doubt that the real amount of the demand for India, as compared with the period before 1871, has been somewhat less. I think it may be interesting to state the exact figures, as your secretary has prepared them for you in that table with reference to British India. It appears from that, that in the five years ending 1855 the net imports of gold into India were about 1,000,000*l.* sterling per annum; in the five years ending 1860 the net imports were 3,200,000*l.* per annum; in the five years ending 1865 the net imports were 7,000,000*l.* sterling per annum, and in the five years ending 1870 the net imports were about 5,000,000*l.* sterling per annum; in the following five years, that is ending 1875, the amount is only 2,300,000*l.* per annum; in the five years ending 1880 the amount is only about 600,000*l.* per annum, and in the last five years the figure has got up again, and is 4,700,000*l.* per annum, and in 1885-86, which is the last of all, the figure is 2,760,000*l.* per annum, so that although the amount in the last 15 years has been considerably less than in the 15 years before that, yet you cannot say that the demand for India has changed in character at all. There has been a large demand for India at both times, and I do not think that that makes much difference in the question we have had before us of the extraordinary demands. The diminution in what India has taken is not a very material set-off to the extraordinary demands for other countries.

572*a*. (*Sir T. Farrer.*) The largest amount of gold that India took was simultaneous with the largest amount of silver which she took?—That would be so. Of course that bears on a different point. I am merely speaking about demands for gold.

573. And both were simultaneous with a very great increase of exports over imports?—I have not prepared myself on that point, but I daresay that would be so.

574. (*Mr. Barbour.*) These figures refer only to imports and exports by sea?—I assume that that is so, but I am not aware that the trade of India by the land frontier is very material. It may be with reference to bullion, but I do not think it is with reference to other matters.

575. But are you aware that there was in former years a certain amount of import of gold across the frontier coming down from the direction of Central Asia?—I have not looked into that at all. It may be material, but that would hardly come into our question at all, because the gold in question never comes into the general markets of the world, as far as I can judge, in any shape or form.

576. But if India were supplied with gold from Central Asia she would not import so much by sea?—It would have a special effect as regards India, and that might ultimately affect all those questions that we are considering, but it would not have much concern with the special point that I have been dealing with, and that is the extraordinary demands for gold that come into the general markets of the world, and whether these are set off in any way by the diminution of the demand for India.

577. I merely wanted to get the fact as regards India. The amount is not known, and I do not believe it is large, the amount that now comes in

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in that way, but it is to some extent coming in?—I am afraid I cannot answer on that special point.

578. I do not believe anybody knows, but I have seen Russian coins and Bokhara coins in India, and know they do come down from Central Asia?—I can understand that would be so.

579. Gold is a luxury in India; it is not the standard. I suppose the amount imported depends very much on the means of the people to pay for gold?—I have no doubt that all through that is a material point with reference to this question, viz., the cost of production at which things are obtained.

580. There is one point on which I should like to get your opinion. When the value of silver began to fall off, to a native of India it appeared that gold was rising. He bought his gold with rupees, and to him it would appear that gold was rising. If you take those figures you will find that when the exchange falls the import of gold falls off temporarily. For example, it fell very much in 1878–79. There was actually a net export. In 1885–86 you will find again a very small import. I would ask you whether a rise in the value of gold as compared with silver appears for a time to check the import?—I should not like to express an opinion on that point without examining the facts, but I should say, as regards India, that probably the gold goes there in those years in which the people are well off, and that it goes in larger quantities than at other times. Whether the difference in price apparently made by taking the exchange at a particular moment would affect the demand in India I really could not say.

581. (*Mr. Birch.*) But is it not clear that as they pay in their currency, which is silver of course, they would pay more silver for the gold?—Yes, but just as they pay more for everything else if it maintains the same relation to gold that it did. No doubt the supposition is, that a fall in the exchange temporarily checks the imports of every kind into India, and stimulates the exports. As far as I understand, that is only a temporary process, and not a very lasting one.

582. (*Chairman.*) You have now given us a general survey of the additional demand upon the gold resources of the world during the last few years. Can you next give us a similar survey with regard to the diminution of the demand for silver, or of the area of the demand for silver during the same period?—Well, I think that with regard to silver I have put the phrase in the notes I have given you, "a diminution of the area of employment," so as to call attention to the fact that there are really two points involved, and these are that you might have a certain diminution of the area, and not much diminution of the effective demand, or *vice versâ*. And with reference to the diminution of the area of employment for silver, the most important event, of course, of these years in one way has been the change in Germany, which substituted gold for silver as its standard, and the result of which was that not only did the demand for silver in Germany, to keep things going there, cease, but Germany for a time had a certain amount of silver to sell. I think about 30,000,000*l.* sterling in all was the sum that was sold. That is the more important of the events as regards silver. Then the next event was, of course, the suspension of the free coinage of silver by the Latin union, and that operated not to diminish the actual employment for silver as compared with what had been in existence before 1872, but a possible employment which might have come into existence if the law had not changed. I think that is necessary to explain exactly what happened in regard to France.

583. You mean that France being a bi-metallic country it is impossible to say for any given period of years beforehand whether its currency will be chiefly gold or chiefly silver. That necessarily depends upon the oscillation produced by the demands of other countries?—That is so, and, in point of practice, just before 1871–72 neither France nor the Latin convention countries had been large consumers of silver practically. They were practically, I should say, gold countries at that time, and they had not been large consumers of silver practically. I think that to some extent before 1872, according to these tables which your secretary has prepared, France was practically taking silver for a very few years; but if you go back a little farther you will find, according to the table, that down to the end of 1864 there was an excess of exports of silver from France, and that had been going on from about 1850, and France altogether, instead of being a consumer of silver, was really a seller of silver, and it disposed of about 75,000,000*l.* sterling. But then after 1865, inclusive, the tide seems to have turned, and France was beginning to take back silver again, and the average import in 1865–69 was 3,600,000*l.* per annum. In 1870–74 this had risen to about 5,500,000*l.* sterling per annum. But part of that, of course, was the large import in 1874, when the fall in silver had commenced, and which, in fact, was the occasion which induced the French Government to suspend the coinage of silver. What surprises me to find is, that in the following five years, notwithstanding the suspension of the coinage, France actually imported 5,000,000*l.* sterling of silver per annum, and even in the five years, 1880 to 1884, France imported very nearly 1,000,000*l.* sterling per annum, so that although you had a diminution technically of the area of silver, and probably of the demand for it as compared with what the demand would have been if France had continued bi-metallic, yet, in point of fact, if you take the 15 years from 1870, and compare them with the 15 years before, you will find that the practical diminution in the demand for silver in France, and I suppose it has been the same in other Latin countries, has not been sensible at all. There has been that change in the area of the employment I have described, but no practical diminution of the actual demand for silver.

584. Then your general conclusion is that, as far as Europe is concerned, gold has been more required, but silver has not been less required?—I think, as far as that goes, that the diminution of the area of employment for silver has not amounted practically to a great deal, but this does not, of course, alter the fact that a great alteration has been made by the suspension of free coinage by the Latin convention countries, with reference to the possible demand which might have come from the Latin countries.

585. The amount of which must necessarily be a matter of conjecture?—I think a matter of conjecture, and I think, with reference to this question, that probably it would have made a considerable difference in the demand for silver, but not much in the demand for gold.

586. Before we go to America, and before we leave the Latin union, may I put this further question to you. The operation of the bi-metallic system in France would have tended to drive out the dearer metal, and as from other causes gold would have become the dearer metal, probably the whole circulation of France would have been silver if she had still remained a bi-metallic country?—I think the point is quite clear, but what I should like to say with reference to it is that it does not follow that although the silver in France was displaced by gold after 1850, that therefore if France becomes bi-metallic silver would displace the gold to the same extent now. That raises really a very important question of theory which perhaps we ought not to go into at this moment. Gold, as it seems to me in former times, circulated very much as what is called monetary merchandise, even in bi-metallic and in silver countries, and it might so continue to circulate if France were again to become bi-metallic. We do not know exactly what the stock of gold in France is, and it would be a matter of very nice and intricate calculation indeed how much silver would be required to go to France to displace the amount of gold necessary to establish silver as the sole standard.

587. (*Sir T. Farrer.*) But I suppose we may go this length, that if the Latin Union had not suspended their coinage of silver a larger amount of silver would have been employed in those countries?—Probably a certain amount of silver, but other events might have happened, and you might have had a less demand for silver, probably, in the United States.

588. (*Chairman.*) That brings us to the United States. Have you any information to give the Commission in regard to them?—I have simply to call attention to the coinage of silver in connexion with the Bland Act, which has been going on, amounting nearly to 5,000,000*l.* sterling for almost 10 years, I think. It amounts to very nearly 50,000,000*l.* sterling—the silver that has been coined in this way in the United States.

589. It need not by law be more than 2,000,000 dollars a month?—A minimum of 2,000,000 dollars and a maximum of 4,000,000 dollars per month, and 2,000,000 dollars a month is about 4,800,000*l.* per annum. They must coin that amount.

590. They have never exceeded the minimum?—They have never exceeded it, I believe. Well, that is a new demand for the United States of a very special character for silver, which I think may be fairly set off against any diminution of the area of employment in other directions as far as the actual use of the metal has been concerned.

591. (*Sir T. Farrer.*) I heard it suggested in the United States that this action of the Government with regard to silver had, on the whole, the effect of rather depressing than raising the market, and very possibly if they had let silver alone the supply and the demand would have accommodated themselves, and the price would have been higher?—That is a question that I should feel great difficulty in going into.

592. The fact of this extraordinary demand stimulated the supply?—These are all very difficult matters indeed to go into on questions of fact.

592*a*. (*Mr. Fremantle.*) Is it not a fact that since 1878 the general course of the silver market has been downward?—No doubt the general course of the silver market has been downwards.

593. Notwithstanding that the United States Government have absorbed nearly 5,000,000*l.* per annum of silver?—I am quite aware of all that, but I am merely mentioning what the broad facts appear to me with reference to what the actual demand for silver has been.

594. (*Chairman.*) Perhaps you could now give us the figures with regard to India?—Of course the figures with reference to India are another great element in the silver question. What has been already stated with regard to gold is true of this, that India and the eastern countries generally have made no change with reference to the nature of the employment, that they still are countries with a silver currency, and using silver now just as they were before 1872; but, of course, in point of fact, the amount of silver going to India during the last 15 years, I think, has not been quite so great as it was in the 15 years before that. But that does not arise from any change with reference to the area of the employment of silver; it is actually a change with reference to the practical consumption, and I do not know that in this question it ought to be a set-off to the other matters. There has been no change legally, but practically there has been a less demand than what there was in the previous 15 years. I think that in the previous 15 years, from 1855 to 1870, you may say that the annual demand for India was very nearly 10,000,000*l.* sterling of silver. I suppose 10,000,000 tens of rupees would be the strictly correct language to use. But at that time India was receiving silver from France. It was receiving a great deal of the silver that was displaced from France.

595. (*Sir T. Farrer.*) At the time of the cotton famine and all that period?—At the time of the cotton famine and all that period.

596. (*Chairman.*) During that period the total received was 10,000,000*l.*, but India was receiving from other quarters?—From 1872 to 1875 the annual amount India was receiving was 3,000,000*l.* sterling annually. That was just before the drop in silver. Since then, in 1875–80, the annual amount has been 7,000,000*l.* sterling, and in 1880–5 the annual amount was 6,000,000*l.* sterling, and in 1885–86 the amount has been very nearly 12,000,000*l.* sterling, so that, although there is a diminution in the last 15 years compared with the previous 15 years, there has been no change in, what I may call, the legal position of India with reference to the matter; and, practically, the Indian demand has been a very large one, so that there is no set-off very much I think to what I have said with respect to the diminution of the area of employment for silver.

597. Then China?—Then with reference to China I have put in a table which you have in your hands, which seems to show that although China is usually a country which exports silver, yet since 1875 if you look at the table you will find that there is an excess of imports of silver in almost every year. In 1875 the excess of imports is 2,000,000*l.* sterling; in 1876, 3,800,000*l.*; in 1877, 5,300,000*l.*; 1878, 3,200,000*l.*; in 1879 and 1880 there is no balance one way or the other; in 1881 the excess of imports is 1,500,000*l.*; 1882 there is a slight balance the other way; 1883 the excess of imports is 1,200,000*l.*; in 1884 the excess of imports is 2,100,000*l.*; so that China from being a country exporting silver, as was the case just before the drop in silver has since then been a country importing silver on balance. (*See* Appendix III., F.)

598. Concurrently with the export of gold?—Concurrently with the export of gold, as we have seen; but, on the whole, China has taken more silver of late years than it did before.

599. (*Mr. Birch.*) But did she take gold at the same time that she took silver?—I do not think for many years, according to that statement which I put in, China has been importing gold upon balance. It has almost been uniformly an exporting country. (*See* Appendix.)

600. Then she would receive the silver as the balance of her trade?—In what way precisely she has been receiving the silver of late years I could not say without knowing something of what the trade of China is.

601. (*Chairman.*) Can you give us any conjectural estimate of what proportion of the silver that goes to India goes there for the purpose of keeping up the currency, and what goes there for the purpose of being hoarded, and practically disappearing from the world's use altogether?—I should like to see some evidence from Indian authorities upon that head. My own impression is, that the amount actively in circulation, of silver, is probably very small. I would not like to say how much it is, but that is my impression,—that there are many parts of India, as I understand, which are almost in a state of barter and very many parts where the chief currency is copper, and that the use of silver is very largely in the large towns of India; and altogether I doubt very much whether the amount actively in circulation anything approaches the sum which would seem to have been coined in India.

602. (*Mr. Barbour.*) The land revenue is the chief portion of the revenue of the Government of India, and it is paid by the cultivators all over the country in rupees; are you aware of that fact?—I could quite understand that that might be the case, and that the silver was used for some very special payments, and yet not used generally; that the copper currency might be the real currency that was used in the daily transactions of life. That would be analogous to what happens in other countries.

603. (*Chairman.*) Your opinion then, to conclude this part of the examination, is, that two changes have taken place. The greatest effect has probably been caused by the increased demand for gold and not by a decreased demand for silver?—That is the case;

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that, so far as one can judge respecting the change in the relative values of the two metals, and the causes operating upon that change, you would say that the increase of the demand for gold coupled with the diminished production, which I have referred to, has been a more important matter than the diminished demand for silver alone. The increased production of silver, of course, would be a material point.

604. But would it not be accurate to say that the demand for gold and silver are strictly correlative, if you exclude note circulation; and that, apart from note circulation, to say that the demand for gold has increased, and that the demand for silver has not diminished, is an impossibility? If one rises, the other must fall, if you exclude consideration of all paper currency?—If the effect of the increased demand for gold is to cause a rise in gold taken in connection with all the other circumstances, then the other metal must fall relatively to gold; but it is purely a question of relation with respect to each of them and all other commodities. That would be a very difficult question to investigate.

605. But as the total work to be done by the two metals as circulation, still excluding note circulation, is the same, or practically the same, to say that the demand for one has increased is exactly the same as saying that the demand for the other has diminished?—I am not quite sure that I should put it so, because I do not know that. That would raise an important question of theory. I do not think the use of the two metals is precisely the same at all. They are sued for money in different ways, and are useful in different ways in respect of money, and I do not think you could speak of them as exactly on the same footing.

606. At all events, you would go so far, I suppose, as to admit that one of the reasons why there has been an increased demand for gold is, that gold is largely taking the place not merely of silver but also of notes?—I think there is no question as to gold having taken the place of paper, and that is an important point; but the chief change with reference to the substitution of gold for silver is simply the change which happened in Germany. There has not been much change otherwise affecting practically the area of employment for silver as compared with what was the case before 1872.

607. Then the only other point upon which I have to ask you any questions to-day is about the use of the precious metals in the arts. Could you give us any information on that point?—Well, I had the advantage yesterday of hearing what was said by Mr. Pixley and Sir Hector Hay, and, of course, I had made some observations upon that subject before; and I should like to say, with reference specially to the estimates of the United States, that I think I can explain some of the difficulties which the gentlemen you had yesterday experienced with reference to these estimates of the Director of the United States Mint. I have got here with me all the reports of the Director of the Mint, bearing on the subject, beginning in 1879, and the general effect is, that they seemed to feel with reference to the question which has already been mentioned, that of the amount of coin going into circulation, and other matters, and the expediency of making estimates of the amount of coin in the country, that they ought to take into account the amount that was used in the arts. Accordingly they began in 1879 by taking note especially of what seemed to be purchased at the mints for use in the arts; and I think the first years when they began to observe it the amount was about 3,000,000 to 4,000,000 dollars, that seemed to be purchased at the mints for use in the arts in 1879. Then the Director of the Mint, at that time Dr. Burchard, states that he sent out circulars to all the people whose addresses he could find in the Directory, engaged in the manufacture of the precious metals in different forms, and asked them to fill up this schedule which he sent out to them, stating how much they used in their business, and how much they obtained from United States coin, how much from foreign coin, how much United States bullion, and I think there were one or two similar headings, but at any rate the Schedule was very complete, and he publishes all the results of the answers which he got, and the figures which he got. The first figure which he thus obtained was 7,000,000 dollars as the amount of gold used in the arts and about 5,000,000 dollars as the amount of silver, and that was about the year 1879. Then, he did not make an estimate in the same way for a year or two after, but simply took the figure of the amount of bullion purchased from the mints and made a shot at the other figures from the information that he had previously obtained, and so got estimates of the amount used in the arts. Then, about 1883, he made that estimate which has been quoted, of about 14,500,000 dollars of gold; that is to say, about 2,900,000*l.* sterling, and that was obtained in the same way as the estimate of 1879, but of course was a great deal larger. However, in the very last report of all of the Director of the Mint, that for the year 1885, in which a new Director seems to have been appointed, Mr. Kimball, I find that the estimate is dropped out altogether, and that you simply have for that year the figure of the amount that is purchased from the mints, with the phrase, "supposed to be for use in the arts," introduced.

608. And what does that amount to?—My impression is, that the estimates in previous years, although I think they were honestly and fairly made, are not made in such a form, or published with such detail, as we ought to expect in a matter of this kind if full credence is to be given to them. Speaking statistically, what I should like to see in any estimate of that kind, would be some account of the replies that were received, and whether the replies covered what were known to be the principal manufacturers in the business, and some distinct statement as to how much is conjecture, and how much is a real figure, more or less examined, in the final total which is put forth, and also some account of the process, so that one could see how the difficulties which must inevitably have cropped up in an investigation of that kind were practically dealt with, as well as what were the means used to prevent duplicates being returned, because you might have a dealer in a large way making a return of what he had disposed of in his business, and then you might have a manufacturer making a return of exactly the same thing. I should have liked to have seen in what way all these obvious difficulties in the statistical investigation were dealt with. So that, looking at what has been done with these estimates, and at the way in which in the last year of all the estimate has been quietly dropped out of the Mint report so far as I can see, I should doubt such a high figure as 3,000,000*l.* as the amount of gold used in the arts in the United States, although possibly some figure between 1,000,000*l.* and 2,000,000*l.* sterling, and possibly nearer the higher than the lower figure, looking at the thing broadly and the account they give of the business, may be fairly well justified.*

609. Do you know of any estimates which have been made with regard to the United Kingdom?—I have never heard so full an estimate made as that made by Sir Hector Hay, I think yesterday, but I should say with reference to that estimate that I should have liked very much to have seen a little more detail about it, both with regard to the locality of the places where the gold was supposed to have gone, and with regard to the objects for which it was supposed to have been used. That might have been a means of enabling other people to check it, and would have made it a good deal more valuable. And I think still it would be highly expedient, if the matter is to

* Since this evidence was given, a later Mint report, viz., for 1885-86, has been issued, from which it appears that a later investigation has been made by means of the issue of Circulars, and a figure of 2,000,000*l.* as the amount of gold used in the arts is arrived at. But there are still no details of the statistical process.

be investigated at all, that some fuller investigation should be made than what has yet been made. It is not desirable to rest upon statements of that kind of a general character.

610. Could you suggest the method by which the investigation should be undertaken? — Not in a breath, as it were. It would really take a good deal of time to make a proper investigation.

611. (*Mr. Birch.*) Do you agree with Sir Hector Hay's view that only about one-fifth of the total amount used is taken from old coin?—It seems to me that with reference to the amount of coin used in that way, I am a good deal afraid that that must always be a matter of conjecture to a very large extent.

612. It is not generally full weight coin; it is light coin which they purchase, and from statistics which I got from the bank with which I happen to be connected, it appears that in Birmingham alone they have been selling 10,000*l.* a week to the jewellers; therefore, that would be one step towards obtaining information; and I think myself there would be no great difficulty in arriving pretty nearly at a conclusion, because we know in England who the principal manufacturers are?—Perhaps so.

613. (*Mr. Fremantle.*) Is it not probable that heavy gold coin would be taken for the purpose of being melted down?—The difficulty seems to me, that you cannot tell what happens with regard to very many small people all over the country who may melt up a few sovereigns now and again, and you cannot tell what the general effect may be. In any case that difficulty would remain.

614. (*Chairman.*) I do not know whether you could assist the Commission by laying down certain lines of investigation upon this point, which is an extremely important one, so that we might with your assistance arrive at something like a conclusion?—I shall think over it and see what I can do, because I think it is a very important matter.

615. Have you any information with regard to other countries?—I have no information with regard to other countries except what Mr. Soetbeer gives, and which you will find in the last book to which I have referred you; and I think it is important to notice that perhaps as regards the Continent, France, Germany, Switzerland, and Holland, what Mr. Soetbeer gives seems to me of more value than what is known with reference to the United States and the United Kingdom as things at present stand.

616. Why is that?—He has taken a good deal of trouble to get together statements of what is used in particular trades in particular towns, the very thing Mr. Birch is suggesting for this country, and he gives a most minute account, for instance, as to what is taken in Switzerland, and that part of France, near Neuchatel, which is connected with watchmaking. These and other statements show that he really has gone into the subject in detail to a very large extent, and you can see for yourselves that there must be a considerable amount used in arts in some way or other. The one important point to my mind, however, is this, that even if you get an estimate at the present time that will not supply the place of estimates which ought to have been in existence in former times, and it does not follow that if you get a figure for a particular year now, that that can be carried back any length of time, and until you get a series of statistics you get nothing quite satisfactory in a matter of this sort.

617. But on the whole you are inclined to think that Dr. Soetbeer's estimates with regard to the Continent may be taken as fairly trustworthy?—I think so.

618. So that if we could add to them the United Kingdom and the United States, we should, at all events with regard to civilised countries, be able to give a fairly accurate estimate of the total amount used in the arts?—I think so.

619. (*Mr. Fremantle.*) But only during recent years?—Only during recent years, and only taken for the very year for which it is given, and then it seems to me that the point to which I have drawn attention more than once to-day would still remain very important, and that is how much is taken for the arts out of the coinage, and how much is got from other sources, because that bears upon the problem which I have referred to in the case of the United States, that you can absolutely trace a quantity of gold to a country, and then you cannot tell what has become of it, whether it is circulating, or whether it is lost, or whether it is used in the arts, or whether it is hoarded. You cannot tell within very wide limits indeed what the state of the stock of gold in a country is.

620. (*Chairman.*) Then there are two very important points connected with this branch of our inquiry which I believe you are not prepared to give us any information upon. One is the total of the precious metals in circulation in the world available for the world's use, and the other is as to the cost of production of the precious metals?—As to the cost of production I can tell you nothing, and of course the one difficulty I should have in the matter would be that if I were making the inquiries I should like to know not merely the cost of production in a sort of average way; but the facts as to the point to which you called the attention of witnesses yesterday, viz., the cost of production at which certain mines would stop, and matters of that kind. And then with reference to the cost of production also it must be considered that that is a thing which of itself may be continually changing just as all other things are changing. If you have a rise in wages in one locality, that raises the cost of production, and if you have a fall in wages, the cost may fall, and you have always to consider that the whole thing is changing, and you may have a mine which is always losing one day, and if you put a better manager over it, it may be making a profit.

621. There is the other question, the total stock of precious metals in existence available for the use of the world; have you any observations to make upon the problems that that question suggests?—I think I may say that the best statisticians, as a rule, have discouraged any attempt to make such estimates with any confidence, and I believe that the Committee of 1876 were very strong upon the subject, and such estimates were hardly permitted and were not gone into. And I must say that I am disposed to agree with them as to the extreme difficulty of forming any conjecture even as to the amount of the precious metals, the stock as one would call it, whether in circulation or in private hoards, whether you can arrive at any satisfactory figures at all. I think that what I have mentioned with reference to the United States, and what has become of the stock there, is sufficient to show that there are very great difficulties indeed in the matter. I have got here with me Mr. Soetbeer's statement upon the subject, which I can put in if it is thought necessary.

622. I think it would be as well?—But he only gives it, I may say, as it were under protest; and I bring along with it another statement which is of a very different kind indeed, and that is a statement of the amount of gold in the banks and State treasuries of the different countries named, because that is a thing which you can see. But if you compare the two together, and try to find what has become of the total estimated stock of the metal in the country, as distinguished from the amount that is in the banks, I do not think that you can arrive at any satisfactory figures at all. Mr. Soetbeer only gives the statement for what it is worth, and I must say it would be very difficult indeed to rest satisfied with it. And I should like to add with reference to it that, of course, even if you do get a correct statement of what you would call the stock of coin in a country, that it may be used in very different ways indeed. Some of it may be actively circulating, and a great deal of it may be circulating only at occasional intervals, just as the coin is used in paying the revenue of the Government of India once a year or once a half year or so, and

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that other parts of it for all that is known may be kept out of sight and hoarded in some way or other; it is impossible to tell. But it is quite impossible to assume that the difference between the whole stock of gold in a country and what is in the banks is actively circulating acording to these estimates.

623. Would not an estimate in which the limit of error was even 30 per cent. be better than no estimate at all?—I think if the limit of error is so wide as that it would make it, with reference to this subject, of comparatively little value. I should be afraid of the figures altogether; and then I attach much more importance perhaps than others would do to the character of the use of the stock, and that unless you can get some estimate of how the stock is actually used, as well as an estimate of the stock itself, it would not be of so very much moment.

624. But still it is evident that for certain inquiries connected with our subject, it would be very important to know what proportion of the total stock was annually added to it from mines?—I think it might be important, but I confess it seems to me so impossible to get at it, that there is very little use trying. I may observe that on former occasions I have had occasion more than once to notice that when there is any great pressure in the money market it is wonderful from what unexpected quarters gold seems to come. Sometimes it seems that do what you like in putting up the bank rate, and making the rate for money in Lombard Street very dear, putting it up to 5, 6, or 7 per cent., nothing seems to happen, but if you go up to 9 per cent. the gold seems to come in a flow, and where it comes from I find that no one very well can tell.

625. (*Mr. Birch.*) That depends very much on the rate of interest in the different countries from which we attract gold. When we raise the rate we must raise it to a point, that supposing the rate of interest in the United States is 4 four cent. people can bring over and employ their money, plus the expense of bringing it over?—What seems to me the interesting point in the matter is this, that apparently there are different kinds of money; that money will come out to you at 5 per cent. some kind, and another kind you won't get under 7 or 8 or 9 per cent. The pressure seems to act upon a new layer or stock of money as it were, so that you can never tell exactly how the stock of gold is used throughout the world.

626. The rate raised here would not materially affect the gold in this country; you must attract it from abroad; the gold here is in constant use?—I am not quite sure of that, because I think I have observed that the raising of the rate attracts money out of the provinces, and seems to bring more money into the banks in some way. Where it comes from I cannot tell.

627. (*Chairman.*) England is perhaps about the only country where you could arrive at it with tolerable certainty, because I think there is very little hoarding in England?—I should like to know; I do not know.

628. (*Mr. Birch.*) What you mean is this, that the banks in the country have certain accumulations of money which they hold in their till and do not send up to London to be employed when they can only get 1 or 2 per cent. for it. Directly they can get so much more they send it up and employ it to the last farthing, which probably they would not if they only got a small rate of interest?—I think that is very important, but what I am a little doubtful about is, whether it is not the case that you get it out of private people's hands as well when the banks are offering 5 and 6 per cent. for deposits—whether that has not the effect of diminishing the loose money that people have about them.

629. (*Mr. Barbour.*) I understand you to say that the coining of silver by America under the Bland Bill probably led to an increased demand for gold in America. Did you say so?—No, I do not think I said so. I said that the coining of silver for the Bland Bill was a set off to any diminution of the demand for silver elsewhere.

630. You did not say that the coining of silver led to an increased coining of gold?—I think what you refer to is that the present artificial arrangements of the United States altogether seem to have increased the demand for gold compared with what that country would otherwise have required.

631. All I want to ask is how that comes about?—Well, at the present moment the United States appear to keep in the Treasury and in the reserve banks a sum that by comparison with England I think would be admitted to be quite abnormal. We get on with a reserve of between 20,000,000*l.* and 25,000,000*l.* sterling, and if you add to that what is in the banks throughout the country, I do not think you would come to more than 30,000,000*l.* sterling, the Scotch and Irish Banks, or even if you add all the banks together according to that estimate that was put in by Mr. Palgrave, you would still be under 40,000,000*l.* sterling, I think. But there you find that in the United States you have 75,000,000*l.* sterling in the Treasury and in the National Banks together, and my impression is partly from communication with some gentlemen in the United States and partly from what I see in the newspapers, that they are generally apprehensive, and wish to keep very strong with reference to gold.

632. (*Sir T. Farrer.*) Is it not the case that there is a very large amount of bullion too?—There is a very large amount of bullion, but the 75,000,000*l.* includes both. The bullion is about 12,000,000*l.*, I think.

633. (*Mr. Barbour.*) On the other hand, you say there has been 50,000,000*l.* of silver coined, a large portion of which is circulating either in silver, or as silver certificates. Does not that reduce the demand for gold in America? If that silver was not circulating, would not its place be taken by gold in some form?—I think that would be so to some extent, although the silver is used apparently for small change mostly, to cover notes of small denominations.

634. So you have that to set against the large demand for gold?—That would be a set off *pro tanto*, of course, so far as gold could really be used in circulation if there were no silver circulating and no silver certificates.

635. (*Mr. Cohen.*) I think you stated that you could not give any idea about the amount of coin in the country?—I think not; I think it would be extremely difficult to form a very accurate idea.

636. Have you any impression as to whether the amount of coin in this country, gold or silver, has decreased or increased within the last 10 or 15 years?—I think we may say that the amount of gold coin has not increased very much for the reasons that have already been stated, at any rate, that it cannot have increased so much as it did in the previous 15 years. Whether there has been an actual diminution owing to the withdrawal of coin for use in the arts or otherwise, I cannot say.

637. We heard evidence yesterday as to the production of mines, that some mines could not produce silver under 3*s.* 6*d.* an ounce I think. Have you any information on that point?—I have no information upon that point, and, of course, I was rather more struck I may say with the statement that it could not be produced under 3*s.* 6*d.* an ounce unless wages fell, than with any other part of the statement, because that is really the important point to my mind, that the conditions are always changing, and also what is the cost of production at one place is not the cost at another.

638. But do you think any public department could get at that,—the Foreign Office or the Board of Trade?—I should say it would be extremely difficult unless it could be got through private information in the City.

639. You agree also as to the impossibility of finding out how much of the coined metal is used in re-coinage?—I think there is not much difficulty with

reference to the coinage of a particular country. At the mints they would always be able, as a rule, to tell you how much of their own coinage comes to be re-coined absolutely, because it is light coin that comes in that would not be taken elsewhere, but there is no means of calculating, I should say, what amount of the coinages of particular countries goes to other countries, and is re-coined there.

640. Or absorbed here in the arts?—Or absorbed in the arts. The quantity of re-coinage is immense, I know.

641. (*Mr. Barbour.*) In the statement relating to British India, prepared by Mr. Murray, there is a column headed "Old silver re-coined," and that, I believe, is only British coin; it does not include the coin of native states, or five-franc pieces, or Austrian dollars?—I am not aware of what is the case with reference to India, but I do know with reference to other mints that the practice is to state what is the re-coinage of your own coins, and I think the United States exceptionally tells us what comes into the Mint from foreign coins as well, and with great detail, but I do not think that that practice is universal.

642. (*Mr. Cohen.*) Have you any opinion as to the quantity of light gold that is locked up in the banks?—I have no special information.

643. You have heard it stated to be 10,000,000*l.*?—I have seen statements of different kinds, but I have no information that I could put before the Commission.

644. Do you connect that at all with the scarcity, or the supposed scarcity, of gold in this country?—I should think not, because I should look for the scarcity of which you are talking in another direction altogether. Chiefly it would have an effect on small change actually in people's hands. If there was any real scarcity for small change it would be felt there, and, as regards money generally, that would have to be ascertained in a very different way from what would be supposed to be an actual scarcity or famine.

645. The next question is the one that I interpolated before. Do you not think that the common feeling among persons engaged in business other than bullion business is that the field for the sale of silver has very much fallen off, contrary to what you have established here?—I do not think there is anything contrary to what I have put down here.

646. You did not catch my question. The question is not whether it is contrary, but whether the people do not think generally that the field within which silver can be sold has very much fallen off, and the consumption has very much fallen off?—I could not say what is the precise impression that people have on the subject, but it seems that those who write upon it, and are acquainted with the facts, as a rule, attach most importance to the increase of the production of silver.

647. What I want to arrive at is whether you do not think it very likely that the fall in silver has been due to panic rather than glut or over-supply?—I should think not. I should think it is extremely unlikely that a panic would be lasting and prolonged to this extent, because the occasional fall in prices sets in motion so many other causes, and so many other things have to be adjusted to it that I do not think panic could be so very material. Panic is a thing that would have a momentary effect. It would not have an effect lasting over several years.

648. Would you advise that the Board of Trade should publish statistical information such as has been collected by this Commission and the Commission on the Depression of Trade, as regards the movement of the precious metals so as to inform the public? At present this is not done; all that is given is the increase and decrease in this country, and no general information as to consumption?—I think that as an officer of the Board of Trade that is hardly a question I should answer, because that involves difficulties as to how that should be done, and my advice should be given to the Board of Trade.

649. I will put it whether a department of the Government should not do that?—Well, I suppose we should say that some things are very desirable.

650. Except there is some special inquiry of this sort the public have no means of getting at any information on this subject?—Of course it would be very desirable that the Government should have means of getting more statistical information. I think that is a point upon which we may all agree, but as to getting things done practically, that is a very different question.

651. (*Sir T. Farrer.*) I suppose you would think that it would not be very desirable to publish figures unless you could be tolerably certain of their accuracy, and also tolerably certain that they would be of some use?—And also that when you undertake an investigation that you would be prepared to publish exactly the process you have followed, so as to enable people to judge of the value of your work. That is perhaps more important than any other.

652. But supposing it was possible to get any statistics as to the use of metals in the arts with accuracy and certainty, you would be disposed to advise that it should be undertaken?—I should think so. It seems to be an important matter.

653. (*Chairman.*) Have you any other point which you would wish to mention?—Well, there is one point that bears on the question of gold production to some extent, and also upon the question of what material has been available in this country, and that is that in addition to the ordinary bullion statistics which can be referred to, account ought to be taken in the ordinary imports and exports of merchandise of the import of gold and silver ore; and the import of silver ore especially seems to be rather material as it is valued at something like 1,000,000*l.* sterling per annum in this country, and that does not appear in the ordinary imports and exports of bullion, but appears in the statistics of merchandise; and if the Commission desire it, I shall put in a table bearing exactly upon this point, and giving the figures as far back as I can carry them. (*See* Appendix III., G.)

654. I think that would be very important?—That is an element which seems not to be taken into account anywhere, and which, if anything, rather tends to confirm the higher estimates of Mr. Soetbeer than the lower estimates of Sir Hector Hay, because it is undoubtedly an import of some little consequence in the matter. The United States and Spain and the South American countries are the countries chiefly from which this silver ore comes.

655. (*Mr. Birch.*) Not as it comes in lead. A great deal of silver comes in lead?—This is silver ore, or ore the greater part of which in value is silver.

The witness withdrew.

Fourth Day.

Friday, 3rd December 1886.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. L. L. COHEN, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P.
MR. J. R. BULLEN SMITH, C.S.I.

MR. GEO. H. MURRAY, *Secretary*.

Mr. R. Giffen.

3 Dec. 1886.

MR. R. GIFFEN examined.

656. (*The Chairman.*) As I shall be obliged to leave very shortly, I have arranged with Sir Thomas Farrer, who has been good enough to relieve me, to conduct the examination of the new evidence you have to offer us; but there are one or two matters arising out of the evidence you gave us last time, on which you are perhaps in a position now to throw some more light. You have additional information, have you not, with reference to the difficulty of accounting for part of the gold which has been traced to the United States during the last 10 years, since the preparations for resuming specie payments began?—Yes, since I gave my evidence I have had the opportunity of reading a letter of the Secretary to the Treasury, dated the 2nd of March last. This is a letter from the Secretary to the Treasury in response to a resolution of the House of Representatives on the subject of the circulation of standard silver dollars and other matters, and this contains a statement which seems to me to bear upon what I said with reference to the quantity of gold that has been traced to the United States and that portion of it which it seemed to me you could not see where it was. The Secretary to the Treasury, in the course of this letter, makes the following statement. He says, "The 220,000,000 dollars of our own full and legal "tender silver, if recoined at the same ratio as the vast "and larger and controlling stocks of silver in Europe, "might vanish like the full fourth of our 550,000,000 "of dollars of gold coin, which fourth we cannot "track or find, and yet have coined and counted, but "have not seen depart, and so ascribe it in our tables "to other banks and private hands." This statement of the Secretary to the Treasury seems to confirm what I said as to the difficulty of tracing some of the gold which we believe has gone to the United States within the last 10 years. One fourth of the 550,000,000 dollars is just about 28,000,000*l.* sterling, which the Secretary to the Treasury says he "cannot track or find."

657. Then all that the Secretary to the Treasury does is to confirm your statement, not to account for the difficulty which you yourself raised?—Yes, that it so. I thought it would be interesting to let the Commission know that the Secretary to the Treasury in the United States has made a very similar statement to what I made.

658. He is practically unable to throw any more light on the subject than you are yourself?—Apparently not.

659. (*Sir T. Farrer.*) May I ask, with reference to your former evidence, whether you know anything of any increase in demand for the purpose of manufacture of silver articles, arising from the present cheapness of silver?—It seems to me always a very important point that the use of silver or any other thing in different ways at different times depends very largely upon the price; and I was interested to observe the other day in the trade reports of the *Times*, I think it was Monday last week, in a trade report from Sheffield, a statement to the effect that the cheapness of silver had increased the business of the manufacture of silver wares in Sheffield. That was a distinct statement in the trade report.

660. (*The Chairman.*) Is there any corresponding decrease in the use of gold in manufactures corresponding to its supposed appreciation?—Not that I am aware of, and I should doubt whether the amount of it would be so sensibly felt as to have much difference in manufactures, but I have not observed any statements upon the subject.

661. But you would anticipate, in accordance with the same law to which you have just referred, that if the use of silver has increased by its being cheapened, the use of gold must decrease by the appreciation of gold?—Yes, that if there was appreciation it would have many effects upon the uses of it in different directions, but what the precise effects would be it would be very difficult to trace.

662. (*Mr. Barbour.*) If silver has depreciated with reference to gold only, and not with reference to commodities, do you think there would be any extra inducement to employ silver in the arts?—I think that this is a statement with reference to the price of silver in gold, and although it would be difficult to trace the change between silver and other commodities, yet in this particular market there is an apparent fall which has the effect of cheapening the price of silver, at any rate for the time. We may assume, therefore, that some of the effects of a fall of price would follow, without going into the larger question of whether silver itself has changed, and how far, with reference to other commodities. In any case, I am merely noticing a specific statement in a trade report that the manufacture of silver wares has been stimulated by the fall in price.

663. (*Sir T. Farrer.*) Have you looked into the question of what general statements of prices there are which will throw any light upon the subject before us?—Since I gave evidence on the last occasion I have looked into it a little, and of course I have paid attention to the question of what statements there are regarding prices, as far as I know them to be in existence.

664. Would you mention what records of prices there are in any useful form which would assist us?—First of all I think I may notice the fact that there are a great many records of prices of different kinds, actual records of prices themselves, such as those contained in Tooke's History of Prices, and such as those contained in publications like *The Public Ledger*, *The Economist*, *The Statist*, and special trade journals of every kind. There are numerous records of prices. Then there are official prices, such as those published by the Board of Trade, which show the average prices of imports and exports obtained by dividing the values by the quantities; and there are similar official and unofficial records in foreign countries. These all

contain prices more or less in the rough, and what I have been particularly examining lately is records of prices in which an attempt is made at arrangement of some kind, so as to show a general result. For the present purpose it seems to me that the most important thing to get hold of, if we can, are prices arranged in some way or other so as to exhibit a general result and not merely prices in the rough, which are very difficult to follow indeed. And that is the point to which I have been addressing myself lately.

665. You mean prices in the first place so summarised as to show a general result and then collected for a series of years so as to show the comparative results in different years?—That is what I mean; that beyond merely getting the records of prices or knowing that they exist, it is desirable in an investigation of this kind, if there are any arranged tables, to look at these by preference, because they bring out a general result.

666. Will you mention what are the most important of the arrangements of this kind which have been made?—Well, I think of all the arrangements of this kind covering the last 50 years or so, and perhaps going back to the beginning of the present century, the most important are the following: There is first of all a study by Mr. Jevons on the fall of gold between 1845–50 and 1862, in which the prices from 1845–50 to 1862 are dealt with. This is one of the first papers in a book which has been published since Mr. Jevons' death, Investigations in Currency and Finance, and it was published originally as a distinct pamphlet in 1863, and that deals with the prices from 1845–50 down to 1862.

667. What is the nature of the prices which he deals with there?—They are chiefly wholesale prices in the London market—in fact, they are exclusively wholesale prices in the London market.

668. Wholesale prices in the London market?—Yes. Next is a study by Mr. Jevons, also in the same volume of Investigations in Currency and Finance, and the paper being one, I think, which he read to the Statistical Society in 1865, in which he deals with the prices from 1782 to 1865. These prices are based chiefly on the figures in Mr. Tooke's History of Prices, which I have already referred to.

669. Are these also the wholesale prices in the London market?—These are also the wholesale prices, and in fact much the same prices as are dealt with in the other investigation which he made, so far as the period between 1845–50 and 1862 is concerned. The second investigation relates to the same thing as the first. Then Mr. Jevons continued the latter investigation in a letter which he wrote to *The Economist* in 1869, and continuing the prices, I think, down to the year 1867.

670. Will you go on with your list?—Then the next arrangement of prices which I refer to is that of *The Economist* itself. This was an arrangement which was used by Mr. Newmarch in the Statistical Society's Journal in 1859, 1860, and 1861, and afterwards in the Annual Commercial History of *The Economist*, and this has been continued to the present time, much the same prices being dealt with as those dealt with by Mr. Jevons. Then, lately, for the last few years there have been published arranged prices of imports and exports of the United Kingdom. These are published in special reports of the Board of Trade, which were prepared by myself, the last one of these being circulated in 1885, and bringing down the figures to 1883, in the case of imports from the year 1854, and in the case of exports from the year 1840. The official reference to this paper is C.—4456, and that would contain the references to the previous reports of the same kind. Then there is a study by Mr. Sauerbeck in the last September number of the Statistical Society's Journal. Then you have had one or two studies by Mr. Palgrave with reference to French wholesale prices, and partly also containing a modification of *The Economist* tables, and these you will find in that memorandum which you have had before you, that was laid before the Depression of Trade Commission. Then Mr. Soetbeer in this book, *Materialien, &c.*, which I referred to in my last examination, gives an arrangement of prices in Hamburg, beginning with the years 1847–50 and ending with the year 1885.

671. Shall you deal with Mr. Soetbeer's afterwards or will you tell us now?—I deal with them all afterwards. In addition, there are some American figures and attempts at an arrangement of prices to be referred to, although I do not set so much value by them, for reasons which will be stated. That seems to me to be a list of attempts at some kind of arrangement of prices in the last half century, as distinguished from mere records of prices themselves, of which there is, of course, an endless number.

672. Then in all these cases an attempt nas been made to summarise the results by means of an index number. Will you explain exactly what that means?—They all use more or less what is called an index number, that is a means by which statisticians have endeavoured, in dealing with large masses of prices, and the prices of many articles, to arrive at some kind of average result.

673. Can you explain how that is obtained?—An index number consists of two things. The first part of it is the statement of the price of a particular thing for a series of years in the form of per-centages on the price of a particular year taken as a unit. Thus, if the price of wheat is 50*s.* at one time, you call that 100. That would be the unit from which you would start. Then if the price falls to 40*s.* that would appear in your table as a fall from 100 to 80. You would substitute 80 for the 40; and the first step in making an index number is to substitute for the expression of a price whatever the quotation may be, a unit of 100, and then work out the per-centage in reference to that unit.

674. On that particular article?—On that particular article, so that 100 is the unit in all cases, and of course it becomes extremely convenient for comparison. Then the second step is the addition of the prices of several articles so as to form an aggregate which may either be 100 or a multiple of 100, or any other sum, the expectation being that the variations in the items will be averaged in the aggregate so that an average rise or fall in a given group or groups of articles will be shown. I gave some illustrations of this, I may say in these reports which were laid before the Board of Trade upon the prices of imports and exports, and I think it can be stated quite easily how the thing would appear. If you take, for instance, three articles, and it does not matter what articles, but say wheat, sugar, and tea, each at the unit of 100. Of course, the aggregate of the unit is 300. Then suppose you have a change of prices by which the three articles would become relatively 90, 80, and 70, the addition of these would be 240, and then you would say that the average price had changed as 300 is to 240, although that might be different from the change in the percentage of prices of each particular article. The average is different from what each particular article is, and that is the essential principle of the second step in the index number.

675. Then you make your index number after the change bear the same proportion to the original unit 100 that the price at the subsequent time bears to the price at the first time?—That is the idea. It does not matter very much what starting point you take, because you have always a change in the relation, and the object is to average the changes in a group of articles so as to give you a general result for the group as distinguished from the special results which you obtain by looking at each article only.

675*a*. You add the number so changed together, and then compare that aggregate number with the original unit?—That is the idea, with the original aggregate unit.

676. Well, then, for convenience sake you make the original unit a large number?—For convenience sake it is highly convenient to make the aggregate either 100 or 1,000 or 10,000, because it shows the results

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almost immediately in the form of a per-centage. If the aggregate is not 100 or 1,000 or 10,000, but say 50 or 60, the difference in the aggregate from year to year would not show the per-centage rise or fall, but you would have to work out the per-centage; whereas, if it is 100, you see the per-centage in a moment, so that it is always convenient if the aggregate unit is 100, or 1,000, or 10,000, or some such figure as that.

677. Before we go any further, can you tell us in what manner these different statisticians have selected the prices on which they found their calculations? Is it from the price lists published in London?—The most of them are taken from price lists published in London. Of course that does not apply to the Board of Trade prices which I have referred to, which are the division of the values of particular articles of import and export by the quantity, so that is a price obtained in a different way. The others are the London market quotations, and of course that is a different thing from the average value of the whole mass of an article imported or exported.

678. The London market quotations of the prices in the market for the time being?—The price in the market for the time being. Mr. Sauerbeck has taken, I think, each month's prices and divided by 12, so as to give the mean for the year. Mr. Jevons takes two months, I think, in the year from Tooke's prices, and gives the mean of these two. *The Economist* in its index number has done much the same in each particular year. It takes the prices on the 1st of January and the 1st of July, and then gives the mean, and of course in a long investigation, I may say, covering a great series of years, it would not matter very much which is taken, because the small variations from month to month in a year would not as a rule be very material in a long investigation.

679. And where the heading comprises different articles at different prices, do you know at all what the process has been in selecting the prices? Cotton, of course, may embrace various descriptions of cotton, of which the prices may different, and so on?—In some of the cases you will find,—and I think this especially applies to Mr. Jevons' work, and to *The Economist* index number, but it also applies to the other arrangements which I have mentioned,—you would have two or three prices for cotton or cotton articles; you would leave two or three columns for cotton or cotton articles, and of course that increases the weight of cotton, as will appear afterwards, in the aggregate number.

680. Then will you tell us what is the objection which has been commonly made to the process that you have mentioned?—Well, I may say that the matter was very much discussed in a Committee which sat in 1840 on Banks of Issue, with reference to some figures of that kind which Mr. Porter in his Progress of the Nation had referred to for the years 1833 to 1837. He had arrived at an index number of that kind and shown the variations from month to month and from year to year in regard to 50 articles. He did not give the details, but apparently a good many of the witnesses who were examined were in possession of the details, and there was a good deal of discussion about it, and Mr. Tooke raised the objection and insisted upon it most strongly that he found, for instance, an article like annatto, which was of very small aggregate value, and entered very little into the commerce of the country, counted in as of as much importance in the table as an article like wheat, which was very important; and the objection was that when articles of varying degrees of importance were treated equally, the aggregate did not really exhibit the average but only the mean of certain numbers. This was quite a true objection and quite valid theoretically, but it is practically dealt with in a variety of ways in the particular arrangements of figures to which I have referred. Mr. Jevons was quite cognisant of it, Mr. Newmarch was also quite cognisant of it, and they tried to meet it in various ways so as to give different relative importance to different articles. And there are other reasons, I think, why the objection practically is not of so much weight as it seems to be theoretically.

681. With regard to these various calculations of figures, looking at them together, to what do they relate?—They relate chiefly, I think, to English wholesale prices, almost I might say to London wholesale prices, with the exception, of course, of the Indian figures, which are a totally different matter to the others, which relate chiefly to London wholesale prices.

682. (*The Chairman.*) Except Mr. Soetbeer?—With the exceptions to be mentioned, the exceptions are that Mr. Soetbeer deals with Hamburg prices; but not exclusively so, because he introduces into his final index number 14 articles of English export trade, which he takes from the export tables of the Board of Trade. And the other exception is the French figures which Mr. Palgrave deals with in that memorandum, but I consider that in recent years the course of French wholesale prices has been, and must have been, much the same as the course of London wholesale prices. It would not be the case if we went back for a very long period, but I think in recent years that that is what we should expect, and apparently it is what has happened, so that practically it is much the same thing as getting London wholesale prices over again.

683. London wholesale prices may be taken, I suppose, as the index of the prices throughout the United Kingdom?—Not only so, but to some extent an index of the prices of a great many articles which enter into the general foreign trade of the world, and I think it is in that respect that Mr. Soetbeer takes the prices of English exports from the Board of Trade returns.

684. But would not the prices in foreign countries be affected by such things as their fiscal systems, the taxes, and legislation with respect to the particular articles?—No doubt, and I propose to state afterwards the importance of taking prices from a great many different places. I am merely calling attention at this moment to the fact that what are dealt with here are London wholesale prices mainly.

685. I do not know whether you mentioned as an exception the Indian prices?—I mentioned that exception, yes.

686. Then which do you think of these the most important?—I think that for scientific purposes and generally, owing to its being almost the first important work of the kind, the greatest value must be attached to that work of Mr. Jevons which I have referred to which is published in that volume of his investigations of currency and finance. The first investigation of all which was published as a pamphlet under the title of "A serious fall in the value of gold" was a work which attracted a great deal of attention at the time, and altogether, from Mr. Jevons' rank as a statistician and economist, we must attach the greatest value, I think, to that work which he did.

687. Then some steps have been taken to meet the objection which you have just said was raised as to the relative importance of different articles which were originally represented as all equal?—This was done by Mr. Jevons by giving practically more numbers than one to certain articles of importance, such as cotton. I think that in regard to cotton he gives it three numbers really. He takes in cotton prices three times over, so that he makes cotton more important, in the number of about 40 articles which he deals with, than any other article to which he only gives one number. That is one of the ways by which Mr. Jevons circumvented the objection of giving equal importance to all the different articles dealt with.

688. (*Sir John Lubbock.*) Did he count cotton as three?—He counted cotton practically as three, and you will see that that is done with reference to other things. You will see that it is a very simple thing, a rule of thumb method, assigning more importance to one class of article than to any other.

689. (*Sir T. Farrer.*) Did he simply treble the number or take different qualities?—He really took different prices for different qualities of cotton.

690. (*Mr. Houldsworth.*) Did he do that arbitrarily or on the principle of quantity?—I am afraid he did it almost quite arbitrarily. He knew that certain articles were prominent and bulky and important, and roughly he assigned a greater weight to them than he did to other articles. There was no attempt at assigning relative importance to each article upon a definite principle.

691. (*Sir T. Farrer.*) To what extent do you think that defect important?—I do not think it is practically so important with reference to these investigations which have been made as it might seem to be at first sight, because, in fact, almost all the important prices, moved in much the same direction at different times. They may have moved to a different extent, but any possible correction would only affect the quantity of the rise or fall at different times, owing to the general changes in almost the whole list of articles being in the same direction in the periods investigated.

692. Supposing that there was a very great difference in important articles, such, for instance, as cotton at the time of the American War, would not that very materially affect the corrections of the general result?—That is so in point of fact. As Mr. Jevons himself notices, that does create a certain difference, which you can see between what he shows and what *The Economist* index number shows. He notices that at that very time we speak of, 1864–65, starting from the same period, namely, 1845–50, *The Economist* shows a somewhat greater rise than what Mr. Jevons shows between 1845–50 and 1862, and the difference he explains is due to the fact that *The Economist* has four cotton articles out of 22, whereas he has only three out of about 50, he says 40 or 50. I have not got the reference quite straight, but I think it is either 40 or 50. *The Economist* has four articles out of 22, so that when you had that great rise owing to the American war, *The Economist* index number went up more than what Mr. Jevons' index number went up. These things can be allowed for upon an inspection of the tables always.

693. Then what do you say with respect to Mr. Jevons' investigations for an earlier period?—I attach a good deal of importance to the carrying back of the figures a good way before the period which is immediately dealt with, and Mr. Jevons' investigations from 1782 to 1865 seem to me to be very important. They show a rise from 1782 to the beginning of the century, that is, taking the aggregate of the index number, and then with fluctuations every ten years or so and minor fluctuations, they show a fall from the beginning of the century down to 1845–50. Since then there was a movement upwards down to about 1862, and still a rise of prices as late as 1867 compared with with 1845–50. Of course Mr. Jevons' figures did not come down later than that but we know from *The Economist* index number that the rise was maintained or went on till about 1873, and since then there has been a fall resembling in some respects the fall from the beginning of the century down to 1845–50, but a little more rapid.

694. I think you said that Mr. Jevons' investigations of the earlier period were founded to a great extent upon Tooke's History of Prices?—He states that he takes the prices mainly from Mr. Tooke's History.

695. And that is a book of very considerable authority?—There is no doubt that, as far as the prices are concerned, it is almost the only record which can very conveniently be referred to.

696. Mr. Jevons had no opportunity of consulting original price lists, original authorities, for that earlier period, I suppose?—Only to a very limited extent, if any.

697. Then with respect to *The Economist* index number, in what way does that compare with Mr. Jevons'?—It is much the same as Mr. Jevons', the articles dealt with being very much the same as Mr. Jevons' articles. I do not think it is quite so good in some respects as Mr. Jevons', especially for the reason, which has already been mentioned, that too much weight appears to be given to cotton and cotton manufactures. I may also say that it seems to have been formed, if I may judge, in a comparatively accidental way. In the Statistical Society's Journal of 1859, 1860, and 1861, the prices of the 22 articles are shown by per-centages, each article separately, but they are not added together so as to form the aggregate index number of 2,200, which was afterwards formed. This was done apparently, after Mr. Jevons' first investigation appeared, so that the index number of *The Economist*, I should say, has been to some extent an accidental formation, but it is, roughly speaking, quite apart from this question of cotton, much the same as the index number of Mr. Jevons.

698. Was this due to Mr. Newmarch?—There is practically no doubt of that. I may say that he was the editor of the Statistical Society's Journal at the time. It was quite well known that it was his doing, and I do know in point of fact that it was Newmarch.

699. I think you have already mentioned what the difference in fluctuations was in consequence of the difference about cotton?—Yes.

700. Well, then, in both these cases there is no allowance made for the different importance of different articles founded upon any actual figures or facts, it is simply an estimate made by the statistician?—To some extent it is a rule of thumb practice in order to allow greater importance to the obviously important articles, but there is no fixed principle or any distinct objective standard followed in assigning the relative weight to the articles.

701. Then would you mention what is the general result of *The Economist* index number?—The general result of that number, continued to the present time, is that there was a fall after 1864–5, as I think you will see from these diagrams which your Secretary has prepared, a rise in 1871–3, and a fall since the latter date to the present time with the exception of a short recovery in 1881–3, so that the prices are now, after being higher, somewhat under the level of 1845–50.

702. Is that a diagram which you have had prepared?—No, this is a diagram which your Secretary has prepared, and which he has given me the advantage of looking at, and I think, if the Commission would look at it, it would be rather interesting just at this point, because the large diagram shows the very exceptional rise in 1864 in *The Economist* index number, owing to cotton. Then prices go down to 1868, 1869, and 1870, then they go up in 1873 very sharply, then they go down very sharply to 1879. After 1879 there is a rise, and then from 1882 almost to the present time there is a descent.

703. (*Mr. Houldsworth.*) Do they affirm pretty well what is given in Mr. Sauerbeck?—They correspond very well with what is given by Mr. Sauerbeck. The prices being the same practically dealt with, namely, London wholesale prices, the result ought to be pretty nearly the same, and the curves do correspond fairly well.

704. (*The Chairman.*) Perhaps it would be convenient at this time if you could tell us why *The Economist* index numbers appear to differ violently with regard to the year 1864 both from Dr. Soetbeer and still more from Mr. Sauerbeck?—It is chiefly the cotton, I believe.

705. So that you would prefer either of two other estimates to *The Economist's* curve?—I would not like to go so far as that. Of course, the true way to use figures of that kind is to compare them, and I should not like to go so far as that. I think we may say that there was an exceptional rise according to *The Economist's* index number in cotton, but apart from that I do not know but what the result is as fairly given as any of the others.

706. (*Sir T. Farrer.*) I suppose, if you wished to know what has been the actual rise or fall in the prices, it would be right to attach a very great value to cotton; cotton being so very important an article?—It raises a question as to what is the real relative

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importance of articles; cotton is, no doubt, very important. Cotton and the textiles taken together are, no doubt, very important.

707. The special rise in cotton would have nothing to do with the value of the precious metals, or of gold, but if you are regarding prices alone it is an important element, is it not?—It is a very important element in the question of prices. As to how far it is related to gold, I think I would postpone answering that at this moment.

708. I only mean to say that, if you are taking statistics of prices, there is nothing incorrect in taking the special rise of a very important article arising from special circumstances?—It is one of the things which you must have regard to. In dealing with a thing comprehensively you must deal with every fact.

709. Will you now explain what is the difference in the method that you have adopted at the Board of Trade in dealing with this question?—The main difference between any of the figures which have been mentioned, and those of the Board of Trade reports is that, dealing with the variations from year to year, allowance is made for the relative importance of each article according to the proportion of its value to the total value of imports and exports respectively; that is to say, I take the import trade and the export trade themselves, and I deal with each article according to its relative importance in that trade. That is purely an objective standard; it is not anything which I invent myself according to any rule of thumb method, but an objective standard which may or may not be of value.

710. Perhaps you would explain the exact method which you adopt in doing that?—The way in which this is done is to multiply the per-centage variation in price of any particular article by the proportionate number of the article, and divide by the sum of the proportionate numbers. It is really a very simple process, by which you allow for the relative weight of each article. You multiply the per-centage of rise or fall by the proportionate number that you have assigned to the article, and then you divide by the sum of the proportionate numbers.

711. Perhaps you will explain from the beginning, how you start?—You give a proportionate number, it appears in these tables, according to the importance of the article in the import trade. Say it is corn. I do not know exactly what the figures are, but suppose corn is 10 per cent. of the import trade, then the proportionate number assigned to it would be 10. Suppose cotton was 5 per cent. the proportionate number assigned to it would be 5, and so on.

712. Then it is founded entirely upon the imports? You take no account of what is produced in the country?—As regards the import trade it is founded entirely upon the imports, and as regards the export trade it is founded entirely upon the exports—a purely objective standard.

713. Then you take your figure at 10 for corn?—Or whatever it may be, supposing it to be 10,—I think it is about that, or from 6 to 10,—you make that the proportionate number.

714. The proportion out of the whole index number?—The proportion of the whole 100. I may say that in this way I do not get up to the index number of 100, because the number of articles in the imports for which you can get prices by dividing the values by the quantities is limited. Imports of that kind are only 81 per cent. of the total, and accordingly the aggregate index number for the imports, the unit which I dealt with, was 81·16, so as always to keep before the mind's eye that the proportion assigned to each article was its proportion of the total imports, and not merely the proportion of the total imports for which one was able to get prices in that way. The same with the exports. I could only get a smaller proportion of export articles for which it was possible to give prices in that way, and the aggregate index number accordingly is 65·8.

715. Then would you explain in what way you show the changes in prices?—The changes are shown by multiplying the per-centage of variation in the case of each article by the proportionate number, and then dividing by the sum of the numbers.

716. Then you take your proportion of the articles to the total imports, and the total exports for one year, you do not vary with each year?—The year I have taken is the year 1875, but you will find in these tables here that the materials are given for taking an index number from any other year that you please. The proportions are shown, and you can see that no material variation would be made by taking the proportions of any other year. And I may say that some time was spent upon this point in the office, and we ascertained that no material difference in the results would be made by taking any other year to find out what the proportions of the trade were. It does not make any material difference.

717. That either the proportions of the different articles to one another do not vary so much, or else the different changes in price of the different articles do not vary so much as to make your conclusions incorrect on account of any change in the relative importance of the different articles?—It is both ways. The proportions of the articles in our trade do not change so very much from year to year as to throw you out. And then, of course, the other question of change of prices would come in also, but there is no such difference in the course of prices as to be very material when the figures are dealt with in this way.

718. Can you say to what extent your results obtained by this process agree with or differ from those obtainnd by *The Economist*?—It seems to me that according to these diagrams which your Secretary has prepared, or rather according to the comparative table of index numbers which he has prepared, that the results are pretty well the same as those shown by *The Economist* index number; that is to say, that you have a rise of prices about 1864, and then you have a rise about 1873, and then you have a fall since the latter date, interrupted to a slight extent but not to a very large extent between 1881 and 1883. But I may say that in working out the totals with this calculation, which is very elaborate and difficult, I have not worked them out completely for a series of years, I have only taken certain years which I had reason to believe were either what I called maximum or minimum years of prices. I have not worked it out for every year; of course, it could be done with a little trouble.

719. Well, in any tables of this kind, by any of these methods, you take a certain description of article and you continue it all through, so that wheat at the beginning of the century is wheat at the present time; iron at the beginning of the century is iron at the present time; and so on. Did not the articles themselves change?—It is quite true that the articles themselves must change, many of them at least to a very large extent,—some may not change quite so much; but there is always that difficulty in the matter,—that you do not know that the price which you are dealing with at one period is the price of exactly the same thing which you are dealing with at another period. That is really an inherent difficulty in these matters, there is no doubt.

720. And it is impossible to get over it?—I do not think you can get over it, even in the case of what may seem to be very simple articles indeed. The simplest of all, perhaps, are the metals. You may know that copper is copper, but I do not know but what there may be, even in some of the metals, some changes in the specific descriptions which are quoted from time to time, and you may not always get the same articles unless you are very careful to see what you are doing.

721. Do we know, for instance, what is iron and what is steel?—I think, as regards an article like Scotch pig iron, there is some evidence with which we would be satisfied that the article is substantially the same.

722. With respect to steel, there has been the greatest difficulty, has there not, in knowing what to classify as steel?—We have had the greatest difficulty at the Board of Trade in knowing how to classify the exports of iron and steel, but how far there have been the same difficulties in the market quotations I am not so sure. I think the people engaged in business would always know what they were buying, and if one acquainted with the steel trade was making up the prices it might be possible to get the same price, a very long way back, for exactly the same thing, but I am not quite sure.

723. At any rate, articles do vary from time to time very much indeed, do they not?—There are great variations in articles, there is no doubt of that.

724. (*Mr. Barbour.*) Are there some articles which remain the same always, such as wheat?—I do not know that wheat remains the same always.

725. You think it varies also?—I have no reason to believe that the wheat brought to market now is the same thing as the English wheat of 500 years ago, for instance.

726. (*Sir T. Farrer.*) Is it not the fact that in the earlier part of the century, the quality of English wheat was so bad that there was difficulty in making bread of it?—That difficulty exists always in such an article as wheat. It varies from harvest to harvest, from generation to generation, and from country to country.

727. Whereas now, in consequence of importation from different parts of the world, wheat has arrived at a higher quality, or at any rate more regular quality?—I think if we go from articles like wheat to articles like meat we may be quite sure that the difference of quality is really enormous, or may be enormous. I may add, with reference to wheat, as it has been mentioned, that there is another cause of variations in price, from time to time, in the different mode of selling wheat which may be adopted. The practice of selling wheat by weight is coming universally into vogue, and that will make some difference, I think,—how much I could not say,—between the prices of the present time and the prices of former periods, when the sale took place by measure. Of course, when the sale was by measure and the sample happened to be very heavy, that would raise the price more than if the sale was to be by weight and you were always selling the same weight.

728. (*Sir T. Farrer.*) Is the sale now by the bushel at such a weight?—The practice of selling by weight or by weighed measure, as we call it, is growing very much, and such sales are converted into English prices of wheat at a certain uniform weight. A quarter is taken to be so many pounds of wheat, barley, or oats.

729. (*Mr. Birch.*) With regard to oats, or any other kind of grain, formerly, no matter what it weighed, you bought it by the quarter?—You bought it by the quarter, and then you allowed for the weight in the price.

730. If you buy a quarter of oats now you always ask whether it is 38 lbs. or 42 lbs., and buy accordingly. Now they sell entirely by weight?—Entirely by weight, and the price by weight would be entirely different from the price when you sell by measure in which the weight is allowed for roughly in the price.

731. (*Sir T. Farrer.*) Then with regard to Mr. Palgrave's French index, does that lead you, so far as it goes, to the same results?—I think the result is much the same. There is this point, with reference to Mr. Palgrave's statements, that he only goes back, I think, to 1865–69, so that he only shows the variation since that time; but since that time the variations which he shows in the French prices and in the corrected *Economist* tables which he gives are much the same as the variations of the *Economist* index number itself. There is not much that would turn upon any differences that appear.

732. Then he makes some allowances for the relative importance of different articles, does he not?—He does so, and the point is stated very fully in that memorandum which was laid before the Trade Depression Commission, but even then I do not think that he quite adopts a purely objective standard. The calculation to some extent remains a rule of thumb.

733. Then with respect to Mr. Soetbeer's tables, have you anything to observe upon them?—Mr. Soetbeer's tables are very elaborate and very full, and he has 114 articles altogether, 100 of them being Hamburg articles. He has this merit, that he divides the articles distinctly into five or six large groups, and he gives an index number for each group, and then he works up finally to his aggregate index number by treating each group as the equal of the other, and he gives you the final index number in that way, so that he allows in the final index number for the relative importance of all the articles in a particular group by putting more articles into one group than what he puts into another; and I think, so far, if that is done intelligently that is a very good method to follow.

734. Then how do his conclusions agree with the English conclusions?—Mr. Soetbeer's results seem to be much the same in this way, that though he does not bring prices down quite to so low a point as *The Economist* index number itself—for instance, comparing the present time with 1845–50,—yet the course of the prices is much the same, that is to say, there is a curve upwards from about 1845–50 to about 1864; then a decline, followed by a curve upwards to about 1873; and then much the same fall in price after that, although not quite to so low a point as what is shown by *The Economist* index number. But I may say that there is some difference between Mr. Soetbeer's and the other prices even in detail; and you find it with reference to agricultural produce, that prices in Hamburg, if we are to take the statement, do not seem to have gone back quite so far as prices in London.

735. Is that in quite recent years?—Yes, the prices in Hamburg. For instance, where in London you find that the price has gone back now to the price in 1845–50, you find that that is not so in Hamburg. For instance, an article like oats. We find according to our English tables that the price has gone back pretty much to what it was in 1845–50, but in Mr. Soetbeer's tables we find that, taking 100 as the unit in 1845–50, the price in the last five years is 130, showing rather a rise and not going back to the same point.

736. Is that since the German protective duties?—It may be partly owing to the German protective duties, but I think partly it may also arise from the possibility that prices in Hamburg have not quite changed all through in the same way as prices in London.

737. You find something of that variation in Mr. Palgrave's table of the price of wheat in France, do you not?—In the price of wheat in France that is noticeable very conspicuously, but I am merely showing that there is a little difference between Mr. Soetbeer's and the other tables, and I think, perhaps, I should add that he appears to me to assign rather too much weight in his tables to one or two very small articles, such as hops, and this seems to affect the result to some extent, because hops have risen enormously in price in Hamburg, comparing 1845–50 with the present time—from 100 to 355, I think.

738. But I suppose hops are things which vary very much from time to time?—Hops vary very much in price, but being a small article, if you give it an equal value with oats, say, you may affect the average result a good deal.

739. Then you have looked at Mr. Sauerbeck's figures which you have referred to?—I have also looked at Mr. Sauerbeck's figures, and of course they deal with wholesale prices in London, and ought to give and do give very much the same result as *The Economist's* index number, with some variations; and they especially agree, I think, in the fall of prices from 1873 or thereabouts.

740. But Mr. Sauerbeck's tables, I suppose, are founded upon these other tables, are they not?—No,

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I do not think so. I think that to a large extent he has taken different price lists, and worked out the thing *de novo* for himself. But he takes pretty much the same articles, as far as I can judge. There are one or two important differences, as he includes, for instance, coal, which I think is not included, if my memory serves me rightly, either in Mr. Jevons' or in *The Economist's* index number. There are one or two matters of that kind in Mr. Sauerbeck's tables.

741. And do Mr. Sauerbeck's figures agree, on the whole, with the other tables?—I think, on the whole, there is no disagreement of a material kind, and at any rate you can see that from the comparisons and diagrams which your secretary has been good enough to draw up.

742. And if it is an independent investigation they affirm the other figures?—To a certain extent they affirm the other figures.

743. Then there are certain American figures that you have referred to?—The American figures that I have referred to are some that are contained in the 9th Report of the Director of the Mint of the United States, in which he deals with very many articles indeed,—the prices of articles in New York; and in which allowance is made for the prices being in paper at a certain period covered, and they are all reduced to gold prices, while the prices of all the articles are reduced to per-centages in quite the proper way, and these per-centages are added up and divided by the number of articles. But I am sorry to say that, following this method and with so many articles dealt with, the result does not appear to be quite satisfactory, because no allowance seems to be made, however roughly, for the relative importance of different articles. I have brought here with me a table showing what the aggregates are, and the index number in different years, in this table of the Director of the Mint, but it does not seem to have been continued since 1880, and I think it is subject to that observation, that allowance is not made sufficiently for the relative importance of the different articles. I may say, too, that articles are put in and dropped out without sufficient explanation, and that may throw you out a good deal. I do not know that the results are very materially different from anything that is shown by the London prices, because you have the course of prices to some extent the same as that which has been shown, but I am not quite satisfied with the table, for the reasons that I have stated. (*See* Appendix III. H.)

744. Then you would not rely very much upon that American table?—I would like a better American table of prices for comparison. I would not say that the result would be materially different when you did get a better table, but one likes to see the prices worked out more completely, so that you can follow it.

745. And I suppose that is the best and most authentic table that has been published in America?—So far as I am aware that is almost the only arranged table that I can speak about. There may have been others, and there are of course a great many records of prices in the United States which may be made use of, I believe, if the investigation was carried further.

746. But they do not exist in any summarised form?—I am not aware that they exist, that is all I can say.

747. (*Mr. Barbour.*) May I ask what is the date of that?—The ninth report of the Director of the Mint. I could not state the year, but the latest year to which the figures are brought down is the year 1880, and I propose to put in this table showing the numbers, for what they are worth.

748. (*Sir T. Farrer.*) Bearing in mind the various qualifications which you have made about these figures, can you tell us, subject to those qualifications, what are the general results of these different tables?—The final result, I should say, is that they show an average fall in these wholesale prices from the beginning of the century down to 1845–50; a rise from the latter date to 1864, continued, but with an intermediate decline, to 1871–73; and a fall since 1871–73, which makes the average wholesale price lower now than for 50 years, and in fact lower than at any time during the present century. That is with reference to these wholesale prices.

749. Then going still farther back, can you make any comparisons with the prices of previous times?—This is of course a matter more of historical and antiquarian interest, and yet it may have some bearing on the question, because up to the end of last century—and we have the authority of Adam Smith for it so far as he investigated the subject—the appearance was that there had been a fall in the value of silver going on for several centuries; that is to say, that the prices of the more important articles appeared to rise. And this is brought out in a very interesting table contained in a paper on weights and measures read to the Royal Society in 1798, by Sir George Shuckburgh Evelyn. The rise from the time of the discovery of America to the beginning of the century, taking wheat, one or two other principal articles of agricultural produce, and labourers' wages, as a standard, is brought out as between 400 and 500 per cent. The table is really very interesting, because the author seems to have used an index number that in many respects is quite as good as any index number that has been used since. Of course it deals with very few articles, and the record is very defective. There are especially no manufactured articles in it. But still, as regards certain principal things, he seems to bring out a fall in the value of silver, and a rise in these commodities of between 400 and 500 per cent.

750. Do you suppose he had data for such things as labourers' wages?—There were no doubt some data in existence at that time, and he refers very clearly to the authorities from which he gets his figures. Of course there has been a great deal added to our information since that time as to that early period, and if the matter were gone into now I have no doubt that a great many corrections and emendations would have to be made in the work that was done, but as far as method goes it seems to be a very good table indeed, and there is no doubt also, I should think, that if you take an article like wheat as the test, that a great fall in the value of silver is shown between 1400 and 1800, and that was the conclusion of Adam Smith in a well-known chapter.

751. (*The Chairman.*) Does Sir George give any tables dealing similarly with gold prices?—He deals, of course, with silver prices, because silver was the standard money of England practically. He simply deals with the prices, but Adam Smith, of course, in dealing with the subject dicusses it as a fall in the value of silver.

752. (*Sir T. Farrer.*) As we know the relation between gold and silver pretty well, that would tell us what the relation was?—I think you would find that if you were working them out into gold prices the fall in the value of gold would not come out nearly so great as the fall in the value of silver, because gold was rising relatively to silver all through these centuries, there is no doubt about that.

753. (*The Chairman.*) From 13 to 1?—From 13 and even from 11 to 1 to about 15 to 1, or even more.

754. (*Mr. Fremantle.*) In 1798?—Yes.

755. (*Sir T. Farrer.*) Down to the end of last century there seemed to be a tolerably continuous rise in silver prices, and the process has discontinued in this century?—The point seems to be that if we compare from century to century we seem to get a steady rise in prices or a steady fall in the value of silver from about 1200 to 1800. Of course, it is quite possible that the fluctuations in a particular period may have been different, but that is what seems to have been going on when we compare century with century. But since the beginning of the present century the course would seem to have been different, because the tendency has been for prices to fall, that is these wholesale prices, with the exception of the short interval between 1850 and 1873, have generally been falling, so that the course of prices in the present

century generally would seem to have been different from the course of prices for several centuries before.

756. (*The Chairman.*) But of course, when you talk of the centuries before 1800, you are talking of silver prices, you are not talking of prices up to the middle of this century, gold prices?—I am comparing them with the standard, but I think it is also clear that there would have been a fall even in gold prices, down to the beginning of the present century, if you work out the relation of gold to silver upon that table of Sir George Evelyn.

757. There must have been a fall in gold if there was 300 or 400 per cent. difference in the silver prices; a fall of 30 per cent., say?—That is quite true, but it is possible that that fall was not quite continuous. You would require to see when the change in the relation between gold and silver took place, and we must not speak too positively as to what would have happened in a particular century, if you put it into gold prices.

758. (*Mr. Barbour.*) But containing the whole time there must have been a rise in gold prices too?—Containing the whole time, there is undoubtedly a rise in gold prices.

759. (*Sir T. Farrer.*) A rise in gold prices as well as in silver prices?—As well as in silver prices.

760. And then the beginning of this century?—The process seems to have been in the other direction since the beginning of this century, with the exception of the interval between 1850 and 1873.

761. Then besides these prices which we have been dealing with, there are some tables of Indian prices; what have you to say about them?—These are the tables of Indian prices which are found in the Third Report of the Trade Depression Commission, and I am not quite clear whether Mr. Palgrave put them in, or how they were put in before the Trade Depression Commission, but I believe they were circulated separately as well.

762. (*Mr. Barbour.*) I know that Mr. Prinsep put in certain tables, and Mr. Palgrave worked out some figures from them?—These tables that were put in contained an index number, and they are signed by Mr. Prinsep. Well this index number relates to 10 articles, three being native grains of home consumption, to each of which the unit of 100 is assigned, making the aggregate for native grains 300; two being grains partly exported, namely rice and wheat, to which the unit of 100 each is also assigned, making the aggregate for these two, 200; and finally, five articles, almost exclusively of export, namely, cotton, castor oil, linseed, jute, and hides, to each of which also a unit of 100 is given, making the aggregate 500, and the aggregate of all being 1,000. So that the index number of India is thus a much smaller affair, of much narrower compass than any of the things which we have been dealing with, and of course it relates to a totally different field, and a totally different area of prices.

763. (*Sir T. Farrer.*) Then, taking the tables as they stand, what would the general result appear to be from them, supposing them to be trustworthy?—The general result appears to be a fall of nearly 20 per cent. in 1870–74 compared with 1865–69; a rise in 1875–79 compared with the previous quinquennial period, and with 1865–69; and finally a fall of about two per cent. in 1880–84 compared with 1870–74. These tables only cover about 20 years, and that is the result of them. You may say that there is a fall in the last five years of about 20 per cent. compared with the first five, but a fall of about two per cent. only in the last five years compared with the second five, that is to say with the period just befor the drop in silver.

764. A fall of two per cent. compared with the period immediately before the fall in silver?—Yes, that is what they seem to show. Of course, if you take particular years, and the very latest year of all, the difference would be greater, and there seems to have been a greater fall.

765. Then have you anything to observe upon the way in which these results have been obtained?—I think, if I may say so in presence of Mr. Barbour, that the assignment of relative importance is not properly attended to in forming this table, that it is somewhat arbitrary in construction altogether. For instance, one of the articles in the last group which has fallen heavily is castor oil, which hardly seems to me to be of equal importance with rice and wheat, which have not fallen at all, comparing 1880–84 with 1870–74.

766. Then do you think the number of articles taken is sufficient to enable persons to draw general conclusions from it?—I am afraid not. I think you ought to have had more articles if you are to deal with the matter satisfactorily at all.

767. Then have you anything to observe upon the mode in which the particular prices given have been taken?—I am not quite satisfied with the mode of arriving at the prices of the first five articles on the list. The mean of the prices in certain markets is taken; that is to say, in markets in different parts of India, which may be very widely separated from each other, and although the range of these prices is very different, while no allowance is made for the relative importance of the markets in any way. I am a little doubtful whether the rise in rice would not come out more than it does if Rangoon and Patna were assigned greater importance than they are assigned by this mode of arriving at a mean price.

768. But assuming that we obtain general results from them; the result would seem to be that there has been no such fall in India lately as there has been in this country?—I think it is apparent, not only from these arranged figures, but from the prices themselves, if you look at them, that there has been no such fall in prices in India in the last 10 or 15 years as there has been in London wholesale prices. I think that would be a very safe thing to say.

769. And on the other hand there does not seem to be any such rise in prices as might have been anticipated from a very large depreciation in silver?—That I must not go into. I would not like to say off-hand what should have happened from a depreciation of silver.

770. That perhaps is not a fair question, but there does not seem to be any great rise in prices in India?—It is quite evident, I think, that there has been no great rise in prices if these articles and markets are taken as the test.

771. Since the depreciation of silver?—I should admit that, but then I am not prepared to say that the depreciation of silver ought to have led to a great rise in prices.

772. (*Mr. Cohen.*) Would you not be prepared to admit that, taking the last five years, prices have fallen in India as reckoned in silver?—There is no doubt about that.

773. These figures establish that?—That there has been a tendency to fall, that prices are lower at the end of five years than in the beginning of the period.

774. Taking the index number established to be lower, you do not question that result?—I do not question that prices at the end are lower than in the beginning, but I do not think there is a large fall in the index number comparing the last five years with the five years 1870–74.

775. The next number is about three lower; you would not question that, would you?—That is so small a difference that it is not enough to reason about in a matter of this kind. You ought to take into account that the number is quite arbitrary, and that is not a result to reason about.

776. What I want to get at is that you do not challenge the figures which have been put in by Mr. Prinsep and Mr. Palgrave showing the movement of prices in India for the last 15 years?—Well, if it is put to me in that way, I must also add that I do no admit the correctness.

777. (*The Chairman.*) I understand your view is that, while you may take these figures as giving a general conclusion, you cannot draw any accurate

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deductions from small variations?—That is the point that I think very important, yes.

778. (*Mr. Cohen.*) If the variation is but a small one, you cannot make a large one out of it. You can conclude that prices have been steady and not varied, because there is a small variation, just as you can say there has been a heavy movement in prices because there has been a large one?—Yes, but I have been explaining that I do not think there are sufficient materials to constitute a good average in these tables showing an index number.

779. As far as they go, you would accept them, would you not?—But it is not a good index number, and I would not even go so far as to say that I accept them even in detail.

780. (*Mr. Barbour.*) There is one question I should like to ask. Have you any reason to suppose that if the index number were based upon a wider series of prices the result might have been different?—I have not been able to investigate the figures sufficiently in India. Nobody would like more than I would to see a very good study of the Indian prices. Each place I should like to see taken by itself, and all the articles belonging to that place, and a good index number formed for perhaps about 50 places, and if you could include wages as well, so much the better. Then I think you might have something which would enable you to arrive at very interesting conclusions.

781. (*The Chairman.*) You are asking more for India than you have given us for England, have you not?—I am, certainly; but there is one reason why you would not require to have so many places in England, that it is a much smaller place than India, and the facilities for communication are very great; but I should certainly like, if the investigation is continued, to see a much larger amount of information even for the United Kingdom.

782. (*Sir T. Farrer.*) But if I understand you, you do not place nearly as great a reliance upon the results obtained by means of these figures obtained for India as we do upon the results obtained for the United Kingdom?—I do not think the index number is quite so comprehensive or quite so good.

783. (*Mr. Cohen.*) For all that, as regards these figures themselves, they are reliable, surely, as between one period and another; the same fault would range throughout?—Well, if I might make a remark,—it is not in any offensive way that I am going to speak it,—there are a great many prices for India, but they are published without any note or comment of any kind, and without explanations of apparent discrepancies from year to year, or between place and place. That seemed to me very important, and at any rate the prices would be much more useful to outsiders like myself if they were carefully annotated and investigated, and if they showed on the face of them some evidence that a good statistician had directed the inquiry, and had investigated all the apparent discrepancies.

784. (*Mr. Barbour.*) Are you not aware that in India the means of communication are very defective in many cases?—I quite believe that that is the case, and that is one reason why I should like prices from a great many places.

785. And are you not aware that India is a country which in many parts is especially subject to drought?—That is so, undoubtedly.

786. And where a country is subject to drought, and the means of communication are very defective, you would expect great variations in the prices of agricultural produce from year to year?—I should be less surprised at it than I should be in a place like London, but then I should also like, when I have the figures put before me, to have notes put indicating what had happened really in those years.

787. Have you at all studied these figures with reference to the various periods at which famines have been reported in India, and if so have you found prices have varied very much according to famines?—Not sufficiently so, because a good many figures I have seen are not accompanied by the necessary explanations. It may be that the thing exists in other figures in the India Office, but I have not had them.

788. For instance, if you look at the figures in statement D., taking Jowar for 1875, 1876, 1877, 1878, 1879, and 1880, you will find that in 1875 it was cheap, in 1876 cheap, in 1877, 1878, 1879 there was a remarkable rise, and in 1880 it became cheap again?—That seems to be so from the figures.

789. Well, was there not one of the severest famines on record in the year 1877, 1878, which would account for the excessive dearness in 1877, 1878, 1879, and the cheapness before and afterwards?—I am not able to go into points of that kind. All I am pointing out is that the explanation is not on the face of the tables, and that notes would be useful.

790. I was merely wishing to bring out the fact that this extraordinary variation in price is very often due to famine?—I should quite believe that, but I think there are many other variations. This point has come upon me unexpectedly, but I think there are other variations which would not be so accounted for, and which I should like to see investigated, and comparisons between place and place.

791. Would you point out one of these variations?—I think that generally,—I do not know whether these are the materials from which I made my observations,—but generally, if you look at statement A., you will find, for instance, with regard to Jowar, that uniformly at Surat the figure seems to be much larger, that is, I suppose, from the way the tables are made up, the price much lower, than at any of the other places on the list. And I should like to see, when I find things of that kind, where the difference is really so great, that some person, in editing the table, had paid attention to the matter and had made inquiries regarding it. It would give me much greater confidence in the figures if there were notes of that kind.

792. (*The Chairman.*) But the fact that the variation was caused by famine, is not that an additional reason for giving explanatory notes and tables?—I should like it, certainly, for all purposes.

793. (*Sir T. Farrer.*) Do you think that the figures are sufficiently trustworthy to enable one to say that there has not been a great rise of prices in India?—I should not like to express an opinion till I see better and more comprehensive figures, and a greater number of articles.

794. All that you have given us hitherto applies to wholesale prices, and principally to the wholesale prices in the London market. You have not given us anything with regard to the prices of labour or of services?—Well, on that point I am not aware of any arranged tables relating to retail prices, nor of any very good tables in which the principle of an index number is used relating to wages. Of course, there are a great many original records of different kinds in existence with reference to wages, although I doubt if there is anything at all which could be used for an investigation of this kind with reference to retail prices.

795. Let us keep retail prices separate. As regards the price of labour, which we may divide into professional remuneration, salaries, and wages,—I think you say that there are no tables that would give us anything like an index number or anything like the general results that you have got out for the wholesale prices?—No continuous tables. There may be some other mode of arriving at the final result, but no continuous tables of that kind that I am aware of.

796. On the whole, do not the investigations which have been made by yourself and by other statisticians, Mr. Courcelle-Seneüil, Mr. Atkinson of Boston, and Professor Leone Levi here, all point in the direction of a rise in wages?—I think that from all that I have observed you may say that there has been a very general rise of wages in Europe, in this country and in the United States, and I think I may say also in India, in the last 50 years. At any rate, there seemed to be a great rise in wages from about 1850 down to 1873; but what the exact course of the movement in wages and still more in salaries has been in short

periods, in such a period for instance as the last 10 years, I do not think there are any means of following out very well.

797. (*Mr. Cohen.*) Would you include all Europe in your answer?—Well, part of Europe. I speak especially of France and Germany, Switzerland, Italy, and the northern countries of Europe. As to Austria and Hungary and the south-eastern countries, and Russia, I am not aware that I could speak at all.

798. (*Mr. Fremantle.*) Then what has been the course since 1873?—This is just the difficulty. You can trace a rise of wages if you take a very long period into consideration—50 years; but what the precise course has been since 1873 in particular, it is very difficult to follow out. We know that in some cases, particularly in the coal and iron trades, wages have gone down since that time, but what the average reduction would be, if we were to take the whole country into account, it would be very difficult indeed to say.

799. (*The Chairman.*) Would it not be possible to get from the books of eminent firms in leading industries what variations had occurred in the wages that they were concerned with?—I think that when some information which we are now getting from the Board of Trade is published it will throw a good deal of light even upon this point, but the difficulty is this, that it becomes absolutely necessary to allow for the relative importance of different kinds of wages, and the constituents of the labour market, if one may say so, change from period to period. You have really got substantially, when you come to an investigation of this kind, to form an average for the whole community, as it were, at one period, which is a very difficult thing, and compare it with the average at another period.

800. But are these sources of error greater as regards labour than they are as regards commodities?—The difficulty is that we cannot get the figures at all. If we could get them they would be free from error to a very large extent, because you would make them up into a general average for the whole community, but the difficulty is to get the records.

801. Could we not call members of leading firms in the most important industries?—Perhaps.

802. (*Sir T. Farrer.*) We have, we know, most elaborate returns of the wages in one very important employment, in ships?—Yes.

803. We have very elaborate returns of seamen's wages, in fact we have the articles of all the ships. We have found very great difficulty, have we not, in comparing and classifying those so as to compare one period with another in consequence of the very great change in the character of the employment?—The difficulty I consider to be very serious indeed, and I may say that in the return we are now preparing at the Board of Trade we see the difficulty continually. The classification in most manufactures is so minute that it is very difficult to assign relative importance even in the return of wages which you would get from a particular firm. They would show you wages beginning at 40*s.* and going down to 15*s.* a week, and what the real average would be upon a proper statistical investigation would be very difficult to tell, and how that should be used to work up to a general average for the whole country, would also be very difficult. I do not say that it is impossible to arrive at some good result by careful manipulation and calculation, but still it would require a good deal of arrangement indeed to bring out general results of wages to show what they were, say at intervals of 10 years, since 1845–50.

804. You have told us that there is a considerable difficulty even with regard to wholesale prices from the change in the character of the articles which we place under the same denomination at different times?—Yes, that is so.

805. And that that causes a necessary defect in any statistics of the kind, a necessary cause of inaccuracy. That difficulty is a much greater one in the case of labour, is it not?—I should say that it is a necessary cause of imperfection in the data, and constitutes a great difficulty in handling them so as to arrive at the final result.

806. So as to make sure, when you are speaking of labour at one period and another, that you are speaking of the same thing?—Yes; and there is also this point. I believe it is the case, for instance, in the United Kingdom that a great levelling of wages up to the metropolitan level has been going on for the last 20 years; so the effect of that would be that wages, if you take the metropolis as a standard, hardly seem to rise, but if you take a place like Glasgow, Manchester, or Dundee, you have a much greater rise of wages than what you seem to have for the metropolis, and the problem for the statistician is how to set off the one against the other and to arrive at a true average for the whole country.

807. Then what you say with respect to wages applies, I suppose, also to salaries and to professional services, that there is no record that would enable you to compare those at different periods?—I think, perhaps, that as regards the latter there are some materials in the income tax returns, but they would require to be manipulated and studied a great deal before you could make much out of them. I do not know how far it would be possible to make anything out of that.

808. (*Mr. Houldsworth.*) Did I understand that an attempt was going to be made with reference to wages?—We are getting up a great deal with regard to wages at the Board of Trade now.

809. Would it be available for us?—I am afraid I won't be in time for the Commission, at least I should doubt it very much. If there is anything in it I shall be in communication with the Secretary, and I shall let him know.

810. (*Sir T. Farrer.*) But your impression on the whole, from all you have gathered, is that wages have been on the rise up to 1873–74?—There is no doubt of that, comparing the present time with 1845–50, there has been an enormous rise in money wages. There is no doubt of the fact, but what the exact course of the history has been, and how far there is a change in money wages, comparing 1873 for instance with the present time, I do not think there are sufficient materials in existence almost to form a judgment, at any rate not to any fine degree of accuracy.

811. But during that long period, during which you have told us there was a considerable fall in wholesale prices, there has been on the whole a considerable rise in money wages?—I do not know that there has been a great fall of wholesale prices, say between 1845–50 and the present time, but at any rate there has been no rise, and yet wages have risen greatly. What the actual course of wages has been in the last 10 or 15 years when wholesale prices have been falling largely is a little uncertain. It seems certain they have not risen but on the average they may have fallen a little, though how much I know of no means of ascertaining.

812. (*Mr. Birch.*) But the most important period for us is the period since 1873. Surely there are regular standards of artisans' wages, people paid so much an hour; there would be no difficulty in obtaining information on this head?—And then you ascertain particular facts, but the difficulty is to work them up to a general average.

813. It would give us some idea. Take London, for instance. In 1873 a firm paid so much an hour to a painter; now they pay so much, and the hours of labour are so many. It may not be so accurate as your calculations generally are, but we may go a long way towards what we desire to ascertain?—You would have to ascertain the proportion of painters at one time to the rest of the community, and a great deal besides of much difficulty, such as whether the employment was constant, and many other things of that kind. The difficulties are really very great indeed. I do not say they cannot be got over, but you require to have a study of the tables, and you must not speak too quickly on the change of wages. In this matter great accuracy may be necessary. An average variation of 5 per cent. say in the wages of the community would

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be very difficult to ascertain, and the difference on the wages 10 years ago and now may not be more than that.

814. And agricultural labourers again. I think you may arrive at tolerable accuracy there?—Even in agricultural labour it would be very dangerous to take the figures of a particular place only, and not investigate the whole subject.

815. (*Sir T. Farrer.*) Then there is another class of payments that I should like to ask you about, what we may call services, such as for instance railway fares, freights of ships; are there any data for ascertaining whether those have risen or fallen?—Well, as to freights I think you will find a table of freights, unhappily it is for a short period only, in the evidence which I gave before the Commission on Trade Depression, and that shows no doubt a considerable fall in rates in the last 10 or 15 years; but that table is not continued very far back, and it would be very difficult to make comparisons for a long period, although I have no doubt practically, considering the subject along with others, that there must have been a great reduction in freights.

816. Railway fares and rates?—Railway fares have been practically reduced in this way, I think, that there is more third-class travelling, and that the third-class carriages are better. Even if the fares remain the same you have points like that that you would have to consider with respect to services of that kind. Railway rates are of most importance in America. There can be no doubt that rates for freight have fallen very much indeed—the rates for through freights; I am not quite sure as to rates generally.

817. Are you aware that Mr. Atkinson states that the reduction of rates in any one year in recent years is equal to the whole money spent upon railways? In that year the reduction of rates has been so great that if the rate of the previous year had been paid it would have paid for the making of the railways for that year?—I have no doubt there is great reduction; but I think it is chiefly through rates.

818. What you have told us has been with respect to wholesale prices. You have nothing of the same sort with respect to retail prices, have you?—I doubt if it would be possible even to get retail prices over a long period. The thing is really so difficult, how a retail price is constituted.

819. Do retail prices follow wholesale prices generally, and to what extent?—I think there is a very important matter in connexion with prices, and it is noticed by Mr. Jevons in that first essay that I referred to, in which he deals with what he calls minor commodities, as well as the principal commodities that he refers to. His principal subject is about 39 or 40 principal commodities, but then he makes a longer list, and the longer list includes altogether 118 commodities, and dealing with what he calls the minor commodities he finds that between 1845–50 and 1862, while the big commodities that he was dealing with rose about 16 per cent. the minor commodities only rose about six per cent., so that although there was an average increase of prices all round, yet the increase in the minor commodities was not so great as the increase in the chief wholesale commodities. Then you have to take into account the retail prices as well, and I think there is a good reason why the retail prices should not always change as the wholesale prices change, at any rate not to the same degree. The reason is, that the price of an article retail includes not only the price of the raw material but the cost of distribution, and to some extent the cost of manipulation as well, so that unless the cost of manipulation and cost of distribution change exactly as the raw material changes, you might have a much greater rise or fall in the raw material than what you have in the article that is finally dealt with by the retailer, and I think that wheat and bread offer a very good illustration. For instance, a rise in wheat from 30*s.* to 60*s.* per quarter, that is a rise of 100 per cent., would be equal to a rise in the price of the raw material of bread from 3*d.* to 6*d.* the 4lb. loaf; but assuming the price of the loaf when wheat is 30*s.* to be 6*d.*, namely 3*d.* for the raw material, and 3*d.* for manufacture and distribution, the price at 60*s.* would be 9*d.* only, that is a rise from 6*d.* to 9*d.* in the manufactured article sold retail, or only 50 per cent. as compared with a rise of 100 per cent. in the raw material. There are other articles, such as clothing and ladies' dresses, and all kinds of articles, to which even stronger remarks would apply as to the difference between the variation in the price of the raw material, and the variation in the price of the manufactured article as sold retail.

820. (*Mr. Birch.*) Don't you think that this co-operative stores movement has tended materially to give people generally the benefit of every fall in price?—In that you still have the great difference that I speak of. That may be the tendency in future, but I am speaking now of things actually as they exist.

821. (*Sir T. Farrer.*) You say that retail prices do not generally follow wholesale prices, or at any rate follow them in a very irregular way?—They do not necessarily follow wholesale prices, at any rate not in the same degree. That is a point which I should like to make.

822. And wholesale prices are not a test of wages? Wages may rise though prices may fall, and *vice versâ*?—I think it would be important to follow the relation of retail prices and wages to wholesale prices. You must not assume the one thing from the other, the important thing is to understand what the facts are.

823. (*Mr. Birch.*) Surely the retail prices would more affect the wages than the wholesale prices?—The relation of wages to retail prices would also be important to ascertain if you could get them.

824. But that is an important element, much more than the wholesale?—I do not know; I think that the wholesale prices are also very important to know, and there is this valuable point about them, that you can obtain them much more easily than the retail prices.

825. It is only with reference to wages. Agricultural wages are generally supposed to be the lowest limit upon which a man can live, and such men cannot buy wholesale. It is the retail price that materially affects wages?—That involves matters of great theoretical interest, no doubt, but wages certainly form the most important element in the price of raw material, because the raw material is produced by labour like other things, and the price represents wages that have been paid.

826. (*Sir T. Farrer.*) Then I think you are of opinion that our figures might be very well taken at many more places than they are? Even the wholesale prices are not the same at all places?—I think it would be very important indeed that you should have figures for a great many places, even as to wholesale prices.

827. Even within the United Kingdom?—Even within the United Kingdom. For instance, I have observed in the recent discussions about Irish rents that it has been urged on behalf of landlords in Ireland that the tenant in Ireland has got the benefit not only of the rise in the prices of agricultural produce, meat, and other articles, that would be deduced from the price in the wholesale markets, but he has got an additional benefit in this way, that the cost of conveyance from his farm to the wholesale market has been diminished and that really is an important point. The rise in prices by which the tenant farmer has gained in some distant part of the country, and the agriculturist generally has gained, may be even greater than what is shown by the rise in prices in the wholesale markets in London or other wholesale markets. This I have already observed, I think, with reference to the French prices, the different course of the prices of wheat in England and France; and I may say also that some figures which I have been looking at lately would seem to show that the price of wheat in Italy has not fallen so much as the price of wheat in London, that there are differences in almost all the principal countries of

Europe, in the course of the price of wheat. As far as the degree of the change is concerned, the fall in London seems to be at a sort of maximum compared with other places in Europe.

828. But their currency would have something to do with it. The Italian notes were at a considerable discount at one time?—Well, if the work was properly done the changes in currency ought to have been allowed for, but I have investigated the figures so recently that I can hardly speak about it.

829. (*Mr. Barbour.*) Might not the cause of the fall in wheat in London be explained by the fact that the area under wheat in England is being reduced?—I have hardly been suggesting causes in what I have said. I am merely pointing out the expediency of having prices from more places than one, because the facts may be different. No doubt if the area under wheat is being reduced in England, it is because the crop is not a profitable one.

830. Therefore there may be a certain quantity of wheat sold in England every year not at a profit. That would tend to make wheat fall rather more than in other countries?—I have no doubt there are such explanations, and other explanations which might be got at, but the point I am pressing of course is that it is important to get prices for more places than one, and that explanation if true would reinforce my argument.

831. (*Sir T. Farrer.*) And you are of opinion that there is a process of equalisation or levelling going on both in prices and in wages?—I think there is, owing to the great reduction in the cost of conveyance, and that that levelling is going on over very wide areas indeed.

832. It appears then that what we have with respect to wholesale prices, is, looking at prices alone, a mere contribution to any general answer to the question whether prices have fallen or risen and to what extent. What you have given is only a contribution to a complete answer to that question?—That is the way in which I look at it, that it is only one element out of many that ought to be got for the purpose of properly discussing the question.

833–4. And that with respect to the mere fact of the price that is paid for an article, when we come to analyse the meaning of that price there arise other considerations, do there not?—Of course, in all these inquiries that I have been making just now, I have not taken into account at all what would be the causes of the changes of prices at different times. That raises questions of exceeding difficulty; how you are to distinguish what particular causes co-operate in producing the particular result in the economic world. It is always a very difficult matter.

835. You have been dealing not with the question of causes but with the question of facts?—Simply with the question of facts.

836. The facts of prices, and the result is that we have an indication, but a very imperfect indication, that, on the whole, prices have followed a certain course?—That is so.

837. Then, as to the cause or meaning of those prices, there may be various constructions put upon them?—I suspect there would be endless discussions as to the causes, of which Mr. Tooke's History of Prices is a specimen. He devotes six volumes to the discussion of the causes of the changes in prices, and chiefly to a demonstration that they are not owing to certain causes, but may be owing to others.

838. To take the thing in its most elementary form, price is an indication of the value of an article in money, is it not?—The prices which I have been referring to are, of course, money prices which may be taken in two ways, one in the articles and the other in money. If the money price goes up, that means that the price that would have been expressed in the article would have gone down.

839. So that it is in fact an equation of two articles?—That is the way in which I always look at it.

840. Then you may alter that relation by increasing or diminishing the quantity of either the one or the other?—You may say that the relation is altered by causes affecting either the commodities or the money; that the investigation of the causes should relate to two branches of the subject, as it were. One branch of investigation would be what has happened regarding the commodities; and the other, what has happened regarding money.

841. If the cost of production of commodities is much diminished, if the facility for bringing them to market is much increased, if the quantity of human effort necessary to bring them into a state for consumption is diminished, then that would naturally diminish the money price of the article, although the money remained the same?—Unless there was a corresponding change in money.

842. The money remaining the same?—Yes.

843. On the other hand, if the cost of production, the difficulty of producing the article, remained the same, and the money differed, then the price would alter in consequence of the alteration in the money?—That is one mode of putting it, but of course it is a very theoretical mode of putting it.

844. (*Mr. Cohen.*) Would it be possible to distinguish how much of a given change could be ascribed to one set of causes, and how much to the other set?—I should not like to say how far it is possible.

845. I am not asking you to do it, I am asking you whether it would be possible to do it?—I think it would be possible to arrive at some important conclusions giving light upon the subject, though whether it would be possible to arrive at an exact definite conclusion, so definite as that question puts it, I should have very great doubts indeed.

846. (*Sir T. Farrer.*) I was going to ask you whether you think you would be able to prepare anything that would throw light upon it?—I think that I should refer you to what I have written on the subject. I can hardly say that I am prepared at present to carry the discussion any further.

847. You have spoken of a general tendency during the greater part of last century to a fall in prices. Have there not during that period, at any rate in the case of manufactured goods, been very great improvements both in production and in transit?—That is a point of very great importance, I think, with reference to these historical investigations; and although the prices that I referred to of Sir George Evelyn seemed to show a rise in the value of silver of between 400 and 500 per cent., still it was important to keep in mind that this was only with reference to the particular articles and things specified in the table, which did not include to any extent manufactured articles, and I believe that if you were to take the course of prices of manufactured articles, that that course would not have been precisely the same as that shown by the other articles. And there is one illustration which is very strong in my mind. You take such an article as sugar; at the time when Sir George Evelyn has commenced, that is about 400 or 500 years ago, the current price of sugar, as you see from Thorold Rogers' History of Prices, was about 2*s.* per lb. That is in the money of the present time, you may say 5*s.* per lb. The present price of sugar is something like 3*d.* per lb., so that it is only $\frac{1}{20}$ of what it was at the time when these figures of Sir George Evelyn that I have been referring to began, and of course, if you were able to include sugar and a good many other articles in the index number it might alter the inference from the index number as to the course of prices very materially indeed. I believe that that would be even more true of the modern time than it would be of any past century, because you have had so much greater a development of manufacture in the last 100 years than at any previous time.

848. Sugar is a very peculiar article, is it not, in which you can trace a variety of causes which would lead to its cheaper production?—It is an article which, from being an article of extreme luxury, has become, through the cheapening of the cost, an article

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of ordinary consumption, and the difference even in money between the present time and 400 or 500 years ago is that the price now is only about $\frac{1}{20}$ what it was.

849. And you are able in the case of sugar to trace the causes, are you not? For instance, the very much larger number of countries producing sugar, the introduction of beet sugar, very great improvements in the manufacture, great facilities of transit, and lastly legislation, which pays people for selling sugar cheap?—That has all contributed to the low price of sugar, as we happen to know from our Board of Trade special knowledge of that special subject.

850. I suppose one may go through several leading articles to see how some of those elements have contributed very largely to the cheapening of the cost of production?—I think with regard to iron that is especially the case. As far as I can make out, a very common price for iron—though it is difficult to read the prices of past times and reduce them to modern money—a very common price for finished iron about 400 or 500 years ago would have been about 30*l.* per ton, and the corresponding price now would be about 5*l.* per ton, so that that would be a very large set-off to the rise in prices which seems to be shown by Sir George Evelyn in that table to which I have referred. Of course iron now enters much more largely into the production of articles than it did in the former period.

851. And we know that there have been very great improvements in the mode by which iron is produced, which it is not necessary to enumerate?—Iron; and even more especially steel.

852. The same thing would be true of cotton to a great extent, would it not, that the manufacture is very greatly improved?—That is true of cotton undoubtedly, and also there is this point, that cotton is a comparatively new article in the manufacture of the world, that the thing hardly existed 400 or 500 years ago.

853. And it is also true, with regard to such articles as wheat, that we know how the cost of production has been diminished by bringing such very large quantities from different tracts of the world now under cultivation which were never cultivated before, and by facilities in transit?—That is quite true.

854. And so you may go through a number of articles and show reasons for the fall in price quite independent of anything relating to the precious metals?—Yes, but the point I was on just now, I think, was a little different. I was trying to explain that the tables we have been discussing, showing the rise in prices down to the present century, would have been modified if we had been able to include other articles where the price has actually fallen at the same time as others have risen.

855. That would relate to the tables that go back to the last century?—Yes.

856. That would not relate to the tables that go back since 1874-73?—It might relate to them a little,—the same principle would apply. The effect of the tables might be modified, if we could include more articles.

857. (*Mr. Birch.*) But tea at the beginning of this century was about a guinea a pound, was it not?—I have heard of 16*s.* a pound. I was not aware that it was a guinea.

858. (*Sir T. Farrer.*) I think the conclusion to which you would point is rather that while there has been a fall in prices, it is extremely difficult to say to what cause or causes, and in what proportions that fall is due to those different causes?—No doubt that is a matter of the utmost difficulty.

859. (*Mr. Barbour.*) With regard to these Indian tables, I may explain that I am not responsible for them, and I think that the figures they give of prices from markets in the interior of the country would not be accepted by anybody as minutely accurate. There are no prices current, no price lists, very often no big market. Some Government official goes and inquires from month to month what the price is. That is sent in, and the figures are published as they come in. While one man may go to an establishment that deals wholesale, if there is such an establishment in the place, another may go to a retail establishment, and so forth. I think, however, as showing the general course of prices they are sufficiently accurate, and there are one or two questions I should like to ask you about them. As regards the prices given for cotton, castor-oil, linseed, jute, and hides in these Indian tables, are you aware that they are taken from the Bombay and Calcutta Commercial Lists?—I did not, I think, make any criticism upon these particular prices. Of course, it was evident from what I said that I was referring to the prices in the interior.

860. These prices from markets in the interior of the country, I believe, are prepared in a different way. There are no price lists?—From what I know of statistics of prices generally, I should say that to get prices from the interior of a country is naturally a very difficult matter, and that it ought always to be explained in giving them forth how they are obtained.

861. And I suppose the prices taken from the well-known price lists of Calcutta and Bombay would be more satisfactory to you than prices brought from the markets in the interior of the country?—If they were properly abstracted from the price lists.

862. If they were correctly taken from the price lists?—And you could also check them to a certain extent from the imports and exports, if they were obtained in a proper manner, dividing the values by the quantities.

863. That would depend upon the correctness of the declared values, would it not?—That is so, and I am assuming that that work is done in a proper way.

864. (*Mr. Cohen.*) When we speak of the appreciation and depreciation of gold, you measure that appreciation or depreciation, as the case may be, by the prices of commodities, do you not?—The phrases are phrases which I am very careful about using myself, but I suppose that would be one way in which you could use the words.

865. Would there be any other way?—You can speak of appreciation and depreciation as between gold and silver themselves.

866. But where there is only one standard in the country you must measure it in something?—But still you could also speak of appreciation and depreciation with reference to gold and silver themselves.

867. Supposing we were speaking now of the appreciation of gold or depreciation in this country, you could only measure that by commodities, could you not?—Commodities and services, that is to say wages. The one thing is as important as the other.

868. The result, then, of the inquiry on which we have been engaged to-day would be to establish the fact that there are really no practical means of telling whether gold has appreciated or depreciated, in your opinion?—No; it only establishes the fact, I think, that it is a difficult matter.

869. I will ask you another question. Have you given your attention particularly to the movement of prices in Europe since the demonetisation of silver by the Latin Union?—Not very specially.

870. Are you aware that since 1873, with only one exception, the prices as reflected in the index number of *The Economist* have moved *pari passu* with the fluctuations in silver?—They seem to correspond very nearly, there is no doubt about that. These wholesale prices seem to correspond with the movement of silver itself as expressed in gold.

871. (*Sir J. Lubbock.*) Did I understand you to say you rather question *The Economist* index number, because you thought undue importance had been given to cotton in the calculation?—No; I was rather pointing out that it was referred to as an imperfection by Mr. Jevons himself, and undoubtedly it seems to alter the result as compared with other figures which are used. It is a point which people must observe and form their own judgment upon as to whether cotton should enter so largely into the aggregate of the index number. It is a question for discussion and judgment. My own opinion is that it does enter too

largely, but that is not like pointing out an error in it exactly: it is a matter for discussion and judgment.

872. Because, if I remember right, the numbers allotted to cotton were three or four, I think you said, out of 22?—Four out of 22, Mr. Jevons points out.

873. That would be something less than 20 per cent.?—That is so.

874–5. Now in the return of the Board of Trade of the per-centage of the value of each specified article of British and Irish produce, I see that—for the exports we take the year 1865—that cotton was 34 per cent. of the exports and 24 per cent. of the imports, and therefore in both cases cotton really occupied a more important position with reference to our commerce even than that which *The Economist's* figures would give it?—And what I should say would be that cotton ought to occupy even a more important place than it does in the *Economist* index number when we are dealing only with the import and export trade of the United Kingdom, but it does not follow that in a general index number that that should be the test of the relative importance. It is a test of relative importance if you are taking your index number for the foreign trade only; but it does not follow that it is a test that ought to be followed when you have a great many articles, and putting in a good many which are not very largely subjects of foreign trade at all, so that the selection is to some extent arbitrary. At any rate the effect is different when you have four articles out of 22 cotton instead of three out of 40 as you have in another table.

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876–7. So that although the weight attached to cotton is even below its real proportion when we are dealing with the export and import trade of the country, when we deal with the whole trade of the country including the internal trade, you think it is rather too much?—It may or may not be too much. If one was forming an ideal index number you would have to consider many points and consider what you should do; what you ought to consider your objective standard would indeed be very difficult to find out.

The witness withdrew.

Adjourned till Wednesday.

Fifth Day.

Wednesday, 8th December 1886.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. L. L. COHEN, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P.

MR. GEO. H. MURRAY, *Secretary.*

MR. AUGUSTUS SAUERBECK examined.

Mr. A. Sauerbeck.
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878. (*The Chairman.*) The Commission at this moment are engaged investigating the demand for and supply of the precious metals for the purposes of currency. That is a question which I think you have dealt with in a contribution to the Statistical Society, and it is on certain facts brought out in your pamphlet that we desire to examine you to-day?—Yes.

879. There is a table here which, I think, you have taken from a well-known book by Dr. Soetbeer, giving the average annual production of the precious metals from the year 1851 to the year 1884. You have translated the weights given by Dr. Soetbeer into pounds sterling for the various decades through that period?—Yes.

880. Have you examined the evidence on which Dr. Soetbeer has framed that table?—No, I have not.

881. You simply take that table as given by an eminent statistician, and one that, therefore, in your opinion, can be relied on within certain limits of error?—Yes. I may just say that in the last edition he made some very slight alterations. Dr. Soetbeer alters the figures as he obtains fuller and more reliable statistics.

882. But he adheres in the main to the figures as they stand in your pamphlet?—My figures are from last year's issue, and the difference in the new edition is very slight. It would not affect general results.

883. You do not think it in the least probable that there is an error of 20 per cent. in any of the figures that you have given?—I should not think so. They are indeed higher than any estimates published by other sources, and for my purpose I found it best to take the highest estimates, so as to be on the safe side.

884. But though these figures cannot be relied on as absolutely accurate, the limit of error is not, in your opinion, very great, as far as you can judge?—I should think not.

885. Are you not in error on page 5 in your quotation from Dr. Soetbeer as to the amount of the precious metals used in the arts?—I do not think so. He puts down the consumption of gold at 110,000 kilos, and the net consumption, after deducting old metal, at 90,000. That is still the estimate in the new edition.

886. But I thought Dr. Soetbeer's estimate was for the whole world, and you add to his estimate of 12,250,000*l.* the requirements of Spain, Portugal, Austria, Russia, Turkey, Asia, Africa, Australia, Central and South America?—The estimates of consumption are for Europe and the United States. What I add for Spain, Portugal, Austria, and Russia is for coinages and banking reserves, and for Asia, Australia, South America, &c., the total requirements.

887. You made no independent investigations into the use of the precious metals for the purposes of arts and manufactures?—No, I did not; but in an indirect manner I came to the conclusion that if anything the figures are too high.

888. There is one table which you quote from Dr. Soetbeer as to the total amount of metallic money in circulation, which would supply us with very important information if it could be relied upon. It is that given on page 6?—That was published in last year's edition, and is not repeated this year altogether, except the amount of gold. Dr. Soetbeer gives the figures with all reserve. Statements of the total stock of money in the world have been published

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by various authorities who have to some extent checked each other, so that we may now have more reliable data. But on the whole estimates as to the amount of gold and silver in a country are, as you are well aware, very vague.

889. They are very vague indeed, and I presume nobody would say that these are to be relied upon as absolutely trustworthy?—No, I should say not; but an estimate as near as possible.

890. But could you give any conjecture, or does Dr. Soetbeer give us any ground for conjecture, as to the limit of error within which we may accept these figures?—No, he does not.

891. Now I want to ask you with regard to the statements on page 8 of your pamphlet as to banking and other modes of economising the precious metals for the purpose of currency. That is, of course, a vital question when we are dealing with the demand made on the stock of the precious metals. Is this a question into which you have made independent investigation?—I made general investigations into it, and, of course, all my remarks refer to the time during the last 14 or 15 years, since the adoption of the German monetary reform.

892. Could you explain the statement you made tha telegraphic transfers are the reverse of an economy of the precious metals?—My statement was that the use of telegraphic and other transfers and of cheques in the place of bills of exchange is probably the reverse of economising, as by means of endorsement a bill can effect a great many payments and requires money only at due date, while for cheques money may be claimed, and bankers have to keep sufficient cash reserves for this purpose. Therefore if such transactions increase it may have an effect upon the current accounts of bankers and hence on their cash reserves.

893. So that the reason that you think that a telegraphic transfer is not an economy as compared with a bill of exchange is that the telegraphic transfer requires a reserve in the bank, and a bill of exchange requires no such reserve?—Transfers may require a reserve.

894. Is that generally accepted by banking authorities?—I cannot say whether this opinion is generally accepted by banking authorities.

895. That is not a subject into which you have made any investigations?—Permit me to explain more fully. Many political economists express the opinion that transactions carried on by bills of exchange and cheques may be almost indefinitely expanded. This is true of bills of exchange as of book credits so long as there is sufficient circulating capital, but in the case of cheques and transfers at banks it is—so far as my judgment goes—only partially true. Where there is a perfect system of clearing many amounts balance each other without requiring money, but the moment they enter into current accounts or that amounts are drawn from current accounts, they affect the banking reserves. In London, therefore, not all transfers would affect the banking reserves, but if the influence is ever so small it must be greater than in the case of payments by bills. But my remarks refer to all commercial countries, and if on the Continent, in places where there is no clearing house, transfers are made, funds must be at the bank, covered to some extent by cash.

896. When you say that it is shown that bills of exchange have lost some of their efficiency by the fact that they have fewer endorsements upon them, and therefore represent fewer transactions, how is that, in your opinion, to be accounted for?—It may be by that custom of making cash payments, by the development of many large banks, and the discounting of bills. Of course, formerly, more people, particularly on the Continent, used to make their payments by bills of exchange. Now they go to the bank, discount a bill of exchange and pay perhaps by cheque or transfer.

897. So that again, in your opinion, the fact that bills do not pass from hand to hand in the manner they used to do requires the banks to hold a greater reserve than was formerly the case?—It may add to the growth of current accounts and consequently to the amount of cash held.

898. Are you of opinion that as matter of fact the banks do hold larger reserves than they used to do?—I am not fully acquainted with that. Of course, it is very difficult to go into all the details of the liabilities of the banks, and how much they have to keep, but on the whole they must be prepared for cheques and transfers, that they may be taken up in money, while if a payment is made by bill of exchange, of course no real payment takes place until the bill falls due. In this country it would appear that, according to the "*Economist's*" statistics, the amount of current accounts and deposits has advanced since 1879 from about 510 million £ to about 570 million £ in 1885. The English banks, excluding the Bank of England, hold about 21 or 22 per cent. covered by cash and money at call. It is assumed that the actual cash held is very small, but the actual amount does not matter so long as the proportion remains the same. Should there be no increase in the total cash reserves, then we have to set against it the fall in prices and the smaller requirements of capital and money for larger quantities.

899. Have you made any independent investigations into the extension of the Clearing House and other systems of economising the precious metals in countries other than England?—Clearing Houses have been established at Paris and Vienna, and also in some places in Germany, but I do not think that the clearings as yet are very important, so far as I have seen the figures.

900. Then your general conclusion would be that whereas in the United Kingdom we are already banked to the utmost, and no further economy of the precious metals is to be anticipated, there is still room in other countries for adopting similar expedients?—Yes, with regard to other countries, I should fully say that; but even in the United Kingdom, probably, we have not arrived at the limit. I cannot see any great advance lately, but still it may be further developed by and by.

901. Then you are of opinion that the United Kingdom, as a matter of fact, has not advanced in this direction during the last 30 years, but that, nevertheless, an advance is still possible?—During the last 14 or 15 years. All my remarks refer to that period.

902. When you call attention, as I think you do, in one part of your pamphlet, to the fact that we may possibly have to look for an increased demand on the stock of the precious metals, through the resumption of specie payment by Russia and by Austria, we may perhaps set against that the probability that on the Continent, and perhaps in America also, an economy of the precious metals may ensue through the extension of banking expedients?—Yes; it may ensue, but you know very well people will not change their customs of paying simply on account of a greater demand for gold, but only when they find that it suits them best for their own purpose.

903. But I suppose you would say that as far as a forecast is possible, it is quite as likely that the Continent will increase its banking operations, as that Russia would adopt a specie payment?—It is quite possible, because a great movement is going on in Germany, anyhow; but the development in order to economise a very large amount of money, particularly by the extension of banking among smaller merchants, shopkeepers, and private individuals, as is the case in this country, would be a comparatively slow one, while Austria and perhaps also Russia may cause a new demand for gold within a not very remote time. They might require 100 million £, and the economising of money would have to be increased to such an extent as to set free a similar amount in Continental countries.

904. Then we come to the tables of prices which you have given, or rather the summary of your in-

vestigations as to prices, supplemented by these tables, which you have handed in?—The tables handed in are partly extracted from my paper in the "*Statistical Society's Journal*," partly they represent additional investigations. (See Appendix IV.)

905. I do not know that I have any special inquiries to make with regard to the items dealt with, but I should like to ask you, with regard to your system of index numbers, whether the conclusion you have arrived at is not that, though index numbers which do not take account of the quantities of commodities dealt with are theoretically inaccurate, practically the results so obtained do not differ materially from those which you obtain if you make some allowance for the quantities?—In a system of index numbers there may occur errors, if you do not take any notice of quantities, and I have checked my figures to some extent by calculating also according to quantities. In fact, I have calculated the figures on three different systems. On page 15 I give the nominal values of the quantities in 1849, in 1873, and in 1885, at the average prices of 1867–77, which formed my standard, and then I calculated these at the index numbers in each year, and found that the change in prices was, if anything, more important than actually shown by my ordinary index numbers, but that it did not differ materially.

906. So that whatever methods you adopt you arrive substantially at the same result?—For the 45 commodities which I have taken.

907. (*Sir T. Farrer.*) Might I ask you how you get your quantities?—You will observe on pages 36 and 38 that I have calculated the quantities of production and imports of all the various commodities. I have estimated the real values and the nominal values at uniform prices.

908. I wanted only to ask so as to get at the quantities. You have the imports, but how did you get at the quantities produced within the country?—Well, as near as possible, partly according to official statements.

909. Are there any official statements?—In the case of wheat we have now official statements as regards the production, and also for potatoes, barley, and oats, and for former years there were estimates by Sir James Caird, the "*Times*," and other authorities. Then with regard to minerals we have official statements of the production in this country. In a few cases, for instance, hides, tallow, and timber, I had to leave out the production as I could not get any reliable estimates.

910. (*The Chairman.*) Your tables are based upon the consideration of the English wholesale price of these 45 commodities?—Yes.

911. Do your conclusions, with regard to the fall of prices, apply to retail as well as to wholesale prices?—Perhaps in a less degree, because there are a good many articles which principally enter into the retail trade, like meat and butter, that have not fallen so much as the general average, but where there is a great decline, as in the case of corn and sugar, I think the consumer gets the full advantage. For instance, in the case of bread, best bread costs now about 6*d.* the 4 lb. loaf, which used to be 8*d.* and 9*d.*, and I understand up to 11*d.*, and inferior bread can be got at 4½*d.* and 5*d.* in London.

912. Does that fall in the retail price of bread correspond in amount to the fall in the price of wheat?—The fall in retail prices might not fully correspond according to per-centage. If the raw article has fallen 40 per cent., and forms about one-half of the value of the manufactured goods, and wages have not fallen, then the fall for the manufactured article would only be one-half in per-centage, but in many commodities there is great competition and curtailment of profit, and prices have probably also been very much depressed on account of that.

913. Then, according to your view, wages have not fallen to the same extent as commodities; but the wholesale producer has had to curtail his profits in order to pay wages, and the retail dealer, on the other hand, has not curtailed his profits, but has paid wages out of the public. That would be the conclusion to which your last answer points, at all events?—No; what I intended to convey was that if wholesale prices have, for instance, fallen 40 per cent., and wages have not fallen, then the decline would only be 20 per cent. for the manufactured goods; but, on the other hand, there was great competition in retail as well as wholesale business, and prices have been perhaps further reduced, but there are no statistical data for any retail prices. It is possible that, to some extent, the retail sellers made larger profits for some time, but I do not think that will be maintained for very long if it has been going on.

914. Competition between the retail sellers will ultimately give the whole advantage derived from the fall of wholesale prices to the public?—It should do so.

915. (*Sir T. Farrer.*) The prices that you have given us here are wholesale prices?—All of them.

916. (*The Chairman.*) You have, I think, constructed a curve of wholesale prices for certain years?—Yes.

917. Do you think that materials exist for making a corresponding curve indicating the variations of retail prices?—No, I should say that there are no data at all to go by.

918. Then do you think it would be possible to construct a similar curve for the variation in the price of labour?—I very much doubt it, but I have not myself gone into the question of labour. I think it is very difficult to get full information with regard to wages.

919. I think you state somewhere in the course of your pamphlet that labour has not fallen to an extent corresponding with the general fall in prices?—That is my impression. It has fallen to some extent, but not by far to the same extent.

920. Have you made any investigations on the subject?—I have not myself made any investigations, but I have seen some publications, and the reports of the last Commission appear to confirm my views.

921. The Commission on the Depression of Trade?—Yes.

922. You have studied the facts there brought forward?—Yes.

923. But the facts that you can obtain from that source are not sufficient to enable you to construct a curve of the kind of which I speak?—It would not be sufficient, I should think. Of course, you would have to get the details of the price of labour all over the country, or at least in the principal towns of the country.

924. Would that be a matter of very great difficulty?—I should say so, but I believe Mr. Giffen is now trying to get that information,—labour statistics. I understand that Mr. Giffen has sent a circular to about 6,000 people. Of course it will be very difficult to digest their replies. Still, he may get some information from which he may perhaps be able to construct such a curve, but for any private individual it would be altogether impossible, I should say.

925. (*Mr. Houldsworth.*) You have a number of subsidiary curves for food, corn, meat, butter, sugar, coffee, and tea. Would it not be possible to make a number of small ones in certain trades for labour as, of course, price lists exist for certain trades, in fact, nearly all trades. They perhaps do not cover the whole ground, but, as far as they went, curves could be constructed?—I myself have not been able, in fact I have not tried sufficiently to get full information on it.

926. (*Sir T. Farrer.*) I think several statisticians have given great attention to this question of the price of labour, that is to say, the rate of wages. Mr. Giffen himself has written a paper upon the state of the labouring classes, and I think the conclusion that he comes to is that during the last 50 years the money wages of labour in this country have risen by about 100 per cent. Are you aware of that?—I have seen Mr. Giffen's paper.

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927. That was in 1884; and at the moment when he wrote his last essay, in 1886, the price of labour was falling again, but not to the same extent as it had risen. That, I think, was Mr. Giffen's conclusion. Then Mr. Leone Levi, I believe, comes to the conclusion that labour had risen in the same way during a long period of years, but that during the last four or five years it had fallen 15 per cent.?—Well, I daresay that would be the case in many trades.

928. I think the general results arrived at by Mr. Atkinson, of America, and Mr. Leroy-Beaulieu, of France, are that the wages of labour have on the whole been rising very considerably up to the period within which they wrote, which is within the last three years. Mr. Leroy-Beaulieu's book was written three years ago, Mr. Atkinson's two years ago, I think. All agree that there has been during the last two or three years something of a fall?—Yes.

929. (*The Chairman.*) A fall of 15 per cent. would not be very widely different from the fall that you calculated in commodities?—Well, it would after all, because such a fall of 15 per cent. would probably be calculated on the highest point, but if you were to take the average of 1867–77 the fall would perhaps be less, because I believe before 1870 wages were still lower than they are now.

930 Are you aware of the terms of the circular which Mr. Giffen has issued to these 6,000 individuals?—I read it at the time.

931. Does it ask for particulars as to the relation which wages now bear to what they did 20 years ago?—I believe he is making inquiries as far back as possible, to get a range if possible. That, I believe, was the purpose of his inquiry.

932. I have not asked you any questions with regard to the demand for precious metals for the purpose of currency, for I believe you have contented yourself with taking Mr. Soetbeer's estimates, on which you think reliance may be placed?—For the demand for coinage for the last 14 years I made some special tables on page 4.

933. Do those tables differ from those which Mr. Soetbeer himself has compiled?—I do not know exactly whether Mr. Soetbeer has made similar estimates. I took the total coinage in Germany, and the amount of bars in the bank, I deducted a rather high estimate of what may have been melted down and exported, and then I arrived at the net requirements for Germany. And in the United States I took the gold currency now and in 1873 as estimated by officials, and from that I arrived at the net requirements; there are further two small estimates for Italy, Holland, and Scandinavia, making the whole requirements 178,000,000*l*. You will remember that Mr. Goschen at the time put them at 200,000,000*l*.

934. These investigations represent original research of yours into the coinage question; they are not merely a digest of Mr. Soetbeer's figures?—These figures are not taken from Mr. Soetbeer at all. I took the official figures of the coinage in Germany and of the estimates in the United States.

935. Now I should like to ask you with regard to the estimates you have made of the increase of production, would you not expect that the amount of production would at all events bear some relation to the demand for the precious metals, that if there is a great increase in the amount of commodities produced and in the number of commercial transactions there will be a greater strain put upon the metallic resources of the world, provided that no change occurs in banking facilities during the same period?—That is my opinion.

936. And it is from that point of view that you have investigated the increase in the production of commodities?—Quite so..

937. Are you of opinion that the conclusions you have arrived at may on the whole be relied upon?—I think they are fairly reliable, as near as can possibly be made out, but, as I mentioned, the figure of 28 per cent. as the increase of production since 1873 is, if anything, rather too high than too low.

938. The increase in the United Kingdom I think you put at 17 per cent., do you not?—Yes, that is from a different set of statistics, from page 36.

939. Then I suppose you would say the total increase in the production of commodities lies somewhere between 17 and 28 per cent.?—I should say so, yes, but nearer to the latter figure.

940. Then we may adopt that conclusion without any serious risk of error?—Just so.

941. So that your general conclusion may be put in this way, that while commodities have increased somewhere between 17 and 28 per cent. the supply of gold during the same period has only just been sufficient to meet new currency requirements, without supplying any of that natural increase which would be required, or at any rate, which, according to one theory, would be required, to maintain prices at their old level?—Yes, that is my conclusion. Of course, you have to take the amount of money in that sense, not of gold alone.

942. I ought to have said gold currency?—The monetary circulation—gold, silver, and paper-money—in those countries having now practically the gold standard.

943. While, therefore, gold is appreciated through that double set of causes—the diminished production, and the increased demand owing to both the increase of commodities and the alterations of currency—silver is depreciated through the double cause of an increased supply and a restricted demand for currency purposes?—Yes.

944. And that the increase of production in the countries using silver has not been sufficient to overtake that increase in supply?—You mean the increased demand in silver-using countries was not sufficient?

945. I suppose you would admit that there is an increase of commodities in silver-using countries as well as in gold-using countries?—Yes, there is certainly an increase in the exports.

946. You have collected no facts with regard to the increased production in silver-using countries?—No. So far as it is exported it is included in my figures, but what is consumed at home would not be included. My figures give the supply in Europe and North America.

947. Still, on the whole, I suppose you would be inclined to admit that there was an increase of production in silver-using countries as well as gold-using countries?—I should say so, yes.

948. And, therefore, if there had been no increased supply of silver, and no restriction of the supply of silver for coinage purposes in Europe, silver prices would have fallen in the same way that gold prices have fallen?—In that case silver prices would have moved in the same proportion as gold prices, but the general fall, if any, would have been much smaller, as, notwithstanding the decreased production of gold, Europe and North America would have received a considerable addition to their monetary circulation, while the exchange of silver would have kept on its former level. It is influenced by the great production of silver and by the diminished demand.

949. So that the increased production and diminished demand have more than made up for the increased production of commodities in silver-using countries?—Just so.

950. So that you are of opinion that causes have been at work which, quite irrespective of silver, have appreciated gold, and quite irrespective of gold have depreciated silver?—If you exclude the changes in the currency. Of course, if silver were still a standard coin in Europe—for instance, if Germany had not altered the coinage, and France was still coining silver—then the level of prices might still be the same as before, as the large production of silver would have been quite sufficient to make good the diminished supply of gold.

951. (*Mr. Cohen.*) I do not think the witness understands that silver is not depreciated as compared with commodities, only as compared with gold?—It is depreciated as compared with gold.

952. (*The Chairman.*) I thought I understood you to say it had depreciated with regard to commodities owing, no doubt, to change of currency in Germany and Italy?—I did not fully understand your question. It has fallen about 20 per cent. and commodities 28 per cent., which is very near.

953. Have you made any investigations as to the relations between silver and commodities in silver-using countries?—No, I have not made inquiries as to that, but I should say that prices have fallen to some extent, because I find that as compared with 1867–77, the 11 years on which I base my calculations, 10 articles exported from India have fallen 35 per cent., while silver has only fallen 20 per cent., at least up to 1885. It was lower this year. Therefore, the conclusion would be that there must be some decline also in the silver-using countries.

954. (*Mr. Barbour.*) Would not the reduction of freight between England and India come in there?—Yes, to some extent the difference may be due to a reduction of charges.

955. I think you said that you were of opinion that Dr. Soetbeer's estimate of the precious metals consumed in the arts was too high?—I think so. But I made no independent investigations, and cannot criticise Dr. Soetbeer's researches. I came to this conclusion in an indirect manner. You will see from page 5 that I found a deficit of 94,000,000*l.* which cannot be proved to exist in any country.

956. And it is on that that you base your opinion?—It is on that that I base my opinion that it could not have been so large, because all the estimates for requirements are very moderate, while I have taken the largest estimates of production.

957. On page 5 also you say the figures of import and export of gold in France are unreliable. Have you any special grounds for saying so?—I found out that there is a great increase in the imports over exports which could not possibly have taken place; and I believe Mr. Soetbeer also proved that the figures must be wrong.

958. Then you said that there had been an increase of production of commodities in the countries using the silver standard?—I conclude that, because we receive more goods from them, like wheat.

959. Have you any grounds for saying that the increase of production in silver-using countries is as great as the increase of production in gold countries?—I should say that it is very nearly so, because we receive now a great many goods from the silver countries. There is a large increase in many articles exported from India.

960. But is not the consumption of the silver countries very great—of India, for instance—in proportion to the quantity exported; therefore an increase in the quantity exported is not a proof that there is a corresponding increase in the quantity consumed in the country?—It is not a proof, but still the imports have also increased, and, of course, there would be the general conclusion that the country has developed just like any other countries in general production.

961. But you could not say with any certainty?—I have no statistics.

962. That the increase of production in the country was in proportion to the increase of imports and exports?—No, I could not say that with any certainty.

963. (*Mr. Birch.*) I see you state that you agree with Mr. Giffen that there had been no extension of banking facilities or of banks during the last 20 years?—I mention in my paper that it does not appear that any important change has taken place in the cheque and clearing systems in the United Kingdom, and that it has been stated by Mr. Giffen that this country was fully "banked" some 30 years ago.

964. From statements which I have collected it appears that in the last 20 years bank offices have increased from 2,417 to 3,886. That is rather a large increase?—Well, of course the trade of the country has increased, and the population.

965. But I think you will allow that the rise from 2,417 to 3,886 is a very large extension of banking?—It is a very large one, but I am speaking specially of the use of cheques and clearing, the economising of money.

966. That would naturally result, would it not. If you had a very large extension of banks, you would have a very large extension of cheques also?—I admit an extension, but not a very important one, particularly as there is a decrease since 1873 in the London clearing.

967. Then you say that telegraphic transfer takes the place of bills of exchange, and therefore that greater reserves are necessary. I think you will agree with me that the majority of business houses keep a large amount of their money at call, and particularly those houses that are liable to have great demands on them in the shape of telegraphic transfers?—Well, just so; they would have more money available like that.

968. But is it not the case that where one draws from a house another one pays in?—Just so. Of course there are a great many payments which balance each other; but still, generally speaking, if everything is paid by cash, the natural conclusion I thought would be that it would affect the banking reserves.

969. But you see what I mean with regard to keeping the money at call, which is now so largely resorted to?—Yes, but the more money is lent out at call, the easier the money market; while if large amounts are withdrawn it will make the market tighter; both influences will act on the monetary reserves. My remarks do not only apply to telegraphic transfers in London, but to the substitution of transfers and cheques generally for bills of exchange, all over the world, also in places where there is no clearing house.

970. You say that the telegraphic transfers have taken the place of bills of exchange. They have, to a large extent; but have you in your estimates at all calculated the amount of bills of exchange which are in existence in England?—The stamp duty on bills of exchange and bank notes in the United Kingdom from 1871–75 amounted to 1,030,000*l.* on the average, and in 1885–86 to 800,000*l.* only. The circulation of bills of exchange in Germany at the end of the year on the average of 1872–75 was estimated at 185 million £ against 165 million £ in 1885–86. There is a decrease notwithstanding an enormous development of trade in Germany.

971. Then have you taken into consideration at all the economy that is produced by the cotton clearing in Liverpool which formerly used to take up 150,000*l.* a week?—No, I have not taken that into consideration. Of course there may be various modes by which an economising has taken place, but it appears also probable that there is an actual decrease in the amount of gold in this country.

972. Then with regard to the index numbers of prices, you think that they are much to be relied on in this way, that wheat would be influenced by one reason, cotton by another, steel by another, and each article would have influences bearing upon it quite distinct the one from the other. You could not well mix them up together?—The reason that regulates the price of each article is to be found in the article itself, except when there is a general development or a general depression, when perhaps several articles together, or all of them, may fall or rise.

973. But no doubt you have often observed how one article falls and the other rises, but from entirely distinct reasons?—I consider all the reasons for a rise or fall in a single article within short periods as distinct, and belonging to that article itself on the whole.

974. But you cannot do that in your index numbers?—I take the average of them. I consider one article may have risen and another fallen, and then I take the average. No doubt, if the average of all the index numbers goes down then the proportion of fall must be greater than that of rise.

975. You say at page 14:—"It may be argued 'that index numbers do not in the aggregate give

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"a correct illustration of the actual course of prices." That refers specially to quantities?—That has been argued, and I think it is to some extent true. They are not fully reliable, but perhaps they are better if you calculate from a higher point downwards than if you calculate from a lower point upwards, as the influence of extraordinary movements on the general average will be less if the price falls from 100 to 25 than if it rises from 100 to 400; for instance, cotton from 24*d.* to 6*d.* or from 6*d.* to 24*d.* The change of price would be exactly the same, but the influence on the total index numbers would be very different.

976. You say on page 4:—"The monetary reforms "in Germany, Holland, and Scandinavia, and the "resumption of specie payment in Italy and the "United States, caused a considerable extra de- "mand for gold," are you aware from whence this gold was drawn, because, I suppose, if it was taken from hoards it would not particularly matter?—The question of hoards exists, but still, nobody has ever proved that there were any large hoards.

977. Not in France?—Well, at least it could not be proved in figures; nobody could estimate it.

978. Has it not been estimated?—It may have been estimated, but I do not know how you will arrive at the figures.

979. I think that when the indemnity was paid to Germany, was there not some information obtained with regard to the amounts that came out of hoards in France?—I do not think that it would be possible to ascertain what amount of money is hoarded and is afterwards put in circulation again.

980. (*Mr. Cohen.*) Have you any information about the hoarding of silver in India?—No, I have no information.

981. And have you any information as to the locking up of gold in this country, through light gold being stored in the different banks?—No, I cannot give any information.

982. Have you any information upon the cost of the production of silver in America?—I cannot answer this question.

983. There are questions connected with prices in your book at page 39. You recapitulate the causes of the fall in prices as being due to the alteration of currencies, the demonetisation of silver, and the insufficient supply of gold; you could not state which is the most prominent of these causes, and to what extent each is accountable for the fall, could you?—I mention two principal causes of the fall of prices:—(1.) Reduction of cost of production and conveyance, and in consequence great increase of production; (2.) alterations in currencies, demonetisation of silver, and insufficient supply of gold. The last three cannot be separated. We have first the alterations in currencies and demonetisation of silver in Germany and Scandinavia, and as a consequence the stoppage of free silver coinage in the Latin Union, Holland, Austria, &c. Then the resumption of specie payment in the United States and Italy. Had silver not been demonetised, the free coinage would not have been stopped, and the decreased supply of gold would not have mattered. On the other hand, had the production of gold increased to, say, 35 million £, the demonetisation of silver would not have had much effect on prices in gold countries. On the whole, I consider the influence of the precious metals is principally on average prices, and would therefore call attention to the dotted line on the diagram at the end of my paper, giving always the average of 10 years. Of course we cannot compare the present prices, those of very depressed years, with a very good year, or even with a whole period, and say that the whole fall is due to currency influences. There are all kinds of influences, great increase in production, diminished demand, general depression, &c.

984. (*The Chairman.*) Your view is that temporary fluctuations in prices are due to temporary alterations of supply and demand, but that any permanent alteration of prices is probably due to some alteration in the relative supply and demand of the precious metals for currency purposes?—Yes, I express these views on page 11.

985. Would largely be due to them?—Largely.

986. (*Mr. Cohen.*) Have you seen a table which has been compiled for the last 13 years, showing that since the demonetisation of silver the fall or rise in the price of 22 of the chief commodities has moved down and up according to the movements of the silver market, with the exception of only one year?—I have not seen these tables, but silver has been falling continuously.

987. I beg your pardon, it has not fallen continuously. What I want to bring out is, that the oscillations of silver down and up have moved with the same oscillations of the prices of these 22 commodities, with the exception only of one year out of the 13?—It has frequently been the case, particularly in 1876, when there was a general fall of prices of commodities in the middle of the year, together with a fall in the price of silver, and they moved up together afterwards. If I said that silver has been falling continuously, I meant that the average annual prices showed on the whole a downward course.

988. You state at page 40 that if silver had not been demonetised, and if the production of gold had not decreased, the fall in prices would have been very much smaller. According to that you give the chief factor in the case of prices to the demonetisation of silver. Is that your opinion?—To a very great extent. I said perhaps it had a greater influence on prices.

989. The demonetisation of silver?—The demonetisation of silver and the decreased production of gold. Of course if the gold production had very much increased, then we might have higher prices now.

990. The great factor in low prices you take to be the combined cause of the falling off of the production of gold and the demonetisation of silver?—Just so. The supply of money has not increased at a similar ratio to the supply of commodities.

991. (*Sir T. Farrer.*) The information you have given us with respect to prices is confined entirely to the wholesale prices of certain articles in London?—Just so.

992. That is founded upon the system of index numbers?—Yes.

993. In that system of index numbers you admit that there are certain defects, although you think that on the average they produce a tolerably accurate result. One of these imperfections is that the relative importance is not given to different articles?—Just so.

994. You have attempted to check that by taking particular years, and you found that it produced much the same result?—Yes, for these 45 articles.

995. But still, whatever it is, it is a defect in the system?—Just so.

996. Then, in the first place, they are not accurate if you take a long period of years. Then the other question. You are obliged for a purpose of this kind to group a number of articles under one heading In the course of a series of years, those articles may entirely change their character, may they not?—They may, but so may other sets of commodities.

997. Quite so, therefore you are not quite certain that at one period in a table of this sort, you are dealing with the same thing that you are at another. That is an inherent defect?—Yes. I must take it for granted that the importance of each article has remained the same.

998. That the character of each article has remained the same?—And the character.

999. But as matter of fact it may not?—It may not.

1000. In this table, at page 12, you group various articles. Take for instance sugar, coffee, and tea, and you get a certain result; but the causes that may have influenced the lowering of price of those different articles may be extremely different, may they not?—They may.

1001. Therefore you cannot deduce any general conclusions as to the cause of the reduction of price of

a whole group that you put together in that way, without analysing and seeing what are the different articles of which it is composed?—That would be necessary if you refer to special articles or even groups.

1002. We are not now concerned with causes, but I should like to ask you one general question concerning the effect of grouping and averages. You have said in your paper that there are special causes of the fall of prices of some articles. If we take two articles A and B, and suppose that A falls in price 50 per cent. from a special cause, whilst B remains stationary, it will be an arithmetical fact that the average fall of the two is 25 per cent., but it will be a fact of little or no significance. Now, if it could be shown that out of the articles contained in your list, or in one of your groups, the majority have largely fallen in price from special causes, would not the value of your average or index numbers for any general purpose be to that extent diminished?—There might occur such a defect in a group as you say. If one large article had fallen and a small one risen, both from special reasons, the mean drawn without regard to quantities would be valueless. Take for example the large article sugar and the small article cocoa. Unimportant articles, particularly if they have followed a different course from the general average should, therefore, be excluded, and the groups be made to contain as many numbers as possible. I have not included very small articles, and have given to very important articles two index numbers. One group contains four numbers only, all the others seven, eight, and 11 numbers. As the movements of the various articles within the groups have not varied greatly during the last 15 years, the average may give a fair illustration, but as mentioned in my paper the defect may exist if a comparison is made with very remote times, and going further back my groups may show this defect. In the total of all the index numbers the probability will be that fluctuations from special causes in one direction will be balanced by movements in the opposite direction. Index numbers checked by quantities give a fairly reliable result, and there is no better system; but it is impossible to be quite exact, as even according to quantities the calculation may be made by different methods, all perhaps open to criticism.

1003. And when you come to consider the causes of prices, before one could get at a very accurate result, it would be necessary to take each article separately and see what are the various causes of depreciation in each?—If you wish to find out the causes for each article, yes.

1004. Well those are all observations to be made on any system of prices framed on this system of index numbers?—Just so.

1005. And apply to the wholesale prices in London which you have given?—Yes.

1006. Have you endeavoured to get wholesale prices elsewhere than in London?—I have the publications in Germany by Mr. Soetbeer, which are not really wholesale market prices; but nearly all deduced from the import prices.

1007. And from prices at Hamburg for different things?—Yes, at Hamburg.

1008. And some of them British prices?—Yes, 14 British export prices, 8 Hamburg market, and 92 import prices.

1009. Have you compared your line of curve with the various lines which he gives in this table of his?—Yes, I have reduced his figures to my level of 1867–77, and I find that up to about 1873 his prices follow almost exactly my curves, but slightly under mine, after that he remained above my level; and the reason for this I found to be that he included a very large number of unimportant articles.

1010. You have seen this diagram of his?—Yes, I have seen that.

1011. You see that in this diagram he has got a variety of lines relating to different articles, and he has put also this red line, which is taken from "*The Economist*," a line very much corresponding to yours, except during the American war, when the index number in "*The Economist*" is much higher?—Yes, at the time of the American war it went very much higher.

1012. It does not correspond with yours there because you have allowed for that. Generally speaking, I think "*The Economist*" numbers and your numbers agree very fairly, do they not?—They cannot fully agree because, first of all, "*The Economist*" numbers are for a certain day, the 1st of January, always, while my numbers give the average prices of the whole year. With regard to the American war I have not made an allowance, but in my table cotton is only counted as two index numbers in 43, while in "*The Economist*" it is counted as four in 22 numbers, and hence the influence of the high prices is much greater in the latter table.

1013. Still the point I want to get at is that this line which gives "*The Economist*" number, on the whole, is not very different from yours—at least not during the last 20 years. But you will observe if you take Dr. Soetbeer's lines of prices of different things, taken from different sources, that they differ very widely indeed from either "*The Economist*" line or yours?—So do mine if you take the prices of different kinds of goods. You observe that in meat and butter for instance if you look at these tables.

1014. I am quite aware of that, that they differ, but he takes these for different periods, the price of productions of agriculture, of cattle, of mining, and 100 articles, including British export articles, and those all, I think, differ considerably from your line?—If you take separate lines of Mr. Soetbeer you would have to compare them with separate lines of mine.

1015. You will see that the continuous blue line is a curve which applies to all articles, and that Dr. Soetbeer lays much stress on the tables from which this curve is drawn as probably more universal and more accurate than the tables of "*The Economist*." You will also see that this blue line of Dr. Soetbeer's, though coinciding in general character with "*The Economist*" curve, is less abrupt and descends much less at the latest period. Have you any observations to make on this?—Yes, I said before that Mr. Soetbeer's figures showed a less important fall, and that the reason for this is principally the addition of a very large number of small articles. Besides, official import prices I consider to be less reliable than market prices, at any rate they follow the movements more slowly. I reduced the prices in Mr. Soetbeer's tables to my level, comparing 1885 with the average of 1867–77, and I found that for the same articles as treated in my tables there is a fall of 24 per cent. as against my 28 per cent. But for the other articles the average decline is only 15½ per cent. Now I should like to draw your attention to the fact that Mr. Soetbeer's index numbers are calculated on the basis of the four years 1847–50, a very low period, and, as I mentioned previously, I consider the system of calculating from low prices upwards to be less accurate than from high prices downwards. Many of the small articles had reached a much higher level already some 15 or 20 years ago, and it thus occurs that small articles like cocoa, pepper, horns, ivory, &c. receive now twice or three times the importance as large articles like wheat, cotton, wool, iron, &c. I have prepared additional statistics, not yet published, as handed in, in which I give still 61 prices of other raw produce and 51 prices of manufactured and partly manufactured articles, nearly all deduced from the Board of Trade returns, which may not yet show the extreme fall. You will observe that taking my 45 descriptions and the additional commodities and calculating all according to their importance, I find an average decline for all the 157 articles of 26 per cent. as against 28 per cent. according to the 45 index numbers of the principal articles. If Mr. Soetbeer were to adopt a similar course I have no doubt he would obtain similar results with regard to German prices.

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1016. I do not know whether you have read any of the reports which have been made lately about trade abroad, reports made by Mr. Strachey to the Foreign Office, and made to the late Commission?—I have read some of them.

1017. From those it would appear that owing to the protective duties in Germany the manufacturers of Germany are in the habit of selling much dearer in Germany than they are selling in England?—So I understand.

1018. And that has been a complaint by many of our own people, the fair traders made it a great subject of complaint?—Yes, I know that that is the case.

1019. (*The Chairman.*) That they sell at a higher price in Germany than they do in England?—Yes, they form a ring, for instance, for the sale of steel rails.

1020. (*Sir T. Farrer.*) They make England what the Americans call the "dumping" ground for cheap German goods, the effect of which would be to make the price list in Germany considerably higher than in England?—Yes, for protected articles, and all articles imported including duty.

1021. I think you will find in those reports that in the case of sugar, for instance, which has been an article peculiarly protected by its bounty, the price at Hamburg is 12 marks for the cwt., if sold to England, and 21*s.* if sold in Germany. That would make a very material difference in so important an article as sugar, would it not?—Yes, it would.

1022. Well then, if we go to America we find the same thing happening. For instance, here is a passage from a book of authority in America, "The history of the United States Tariff." "It is a well known fact "that the mining companies of Lake Superior had "controlled until within a year or two almost the "entire production of copper in the United States. "They maintained for many years a combination "for fixing the price of copper. Their price has been "steadily higher than the price of copper abroad, and "when they have found it impossible to dispose of all "their product at home at the combination price "large quantities have been sent abroad and sold "there at lower prices in order to relieve the home "market." There again, you would have the prices in America of an important article like copper higher than the prices in England?—Quite so, where they are influenced.

1023. Even though the article was exported from America. Then in the appendix to that book, at page 106, Mr. Taussig gives the price of copper in England as from one-third to one-seventh less than in America during a series of years from 1875 to 1884; therefore a price list of that in America would be very different from a price list in England?—Yes, but of course the difference would principally be where there is an alteration in the duties. If the duty had always remained the same, perhaps for a great number of articles you may find the same curves.

1024. I am not speaking now of the curves, I am speaking of the price of the article. When you take the price from 1875 to 1884, as you have here, you find that on the whole it is from one-third to one-seventh higher in America than it is in England. That would alter very materially one of these curves so far as copper is concerned?—Just so.

1025. Take again steel rails. The difference there between the price in England and the price in America has been as much as 100 per cent., therefore if you take a price list in America it would be a very different thing from a price list in England?—You would of course have to take the prices in the free market.

1026. But we are now speaking of the relation of money prices to articles, surely we must take the money prices as they exist in America and the money prices as they exist in England, must we not. These are the prices at which all steel rails and all copper are sold in America?—Just so.

1027. (*Mr. Barbour.*) Is there a duty on the import of copper and steel rails into America?—I have no doubt there is.

1028. (*Sir T. Farrer.*) What I wanted to get at was that, taking three such articles as sugar, copper, and steel, the wholesale prices in those foreign markets do not correspond with the wholesale prices in our own, and therefore if we are to come to any attempt to get at the relation between certain articles throughout the world and gold and silver, we must have a much larger induction than can be obtained from the prices of wholesale articles in London.

1029. (*The Chairman.*) That difference of price between America on the one hand and a free market like England on the other, though it undoubtedly exists, does not affect the curve of prices from year to year, or does not materially affect the curve of prices from year to year?—It may not if the duties remain the same.

1030. (*Sir T. Farrer.*) It certainly *may not* affect the curve, but it *may* and probably does in this way. Is it not the case, that protection at first will make the price of the article very much higher in the protected country?—Yes.

1031. But it frequently happens, does it not, as we know it has happened with sugar, that that induced over-production in that country?—Just so.

1032. And possibly in the end the price in the protected country may fall so as to be very nearly on a par with the unprotected country?—Yes, that may be the case.

1033. So that it will make the fluctuations even greater than in the unprotected country. Then, I would just ask you this: Has not the object of our recent legislation from Sir Robert Peel's time been to remove as many of the barriers as possible from production and importation, and consequently to make this country as cheap a country as possible for all articles that we want?—I think that has been done, but that has been done a long time ago. If you go over the prices of the last 20 or 30 years they are no longer affected by duties.

1034. The prices in this country are no longer affected by duties, but the prices in other countries are affected by duties?—Yes, they may be.

1035. And by bounties?—Yes.

1036. And by that indirect form of bounty given by protection which enables the manufacturers to form a ring and sell dear at home and cheap abroad?—Yes.

1037. I think you said that you could not get any statistics of retail prices?—No, I could not.

1038. Well, I suppose, for the purpose of comparing the quantity of gold with the demand for it, as shown by prices, we ought to take retail prices quite as much as wholesale prices, ought we not?—They would, of course, be very useful to know, but I do not think it would be possible to get complete statistics.

1039. I quite agree with you, but retail prices are as important for that particular purpose as wholesale prices, are they not?—Oh, they are.

1040. Then, I think you said that you have not got any statistics whatever of what we may call the prices of service. Taking now the different forms in which we may get the prices of service. First of all the public service. Has there been any diminution of salaries, or of wages paid in the public service?—I cannot give any information on that, but I may refer to a table in Germany where there has still been an increase in the last 14 years in the salaries of the railway servants.

1041. Has there been any diminution?—No, there has been an increase. There was a considerable rise in earlier years from 1850 to 1872, and a slight rise from 1872 to 1886, according to Mr. Soetbeer, but it is just possible that the salaries in 1872 were far too low in comparison with the cost of living.

1042. That is the public service in Germany, is it not?—Yes, in Prussia.

1043. Well, then, in professional remuneration has there been any fall?—I have not gone into that. All

my own researches have been confined to the wholesale articles.

1044. And with regard to the wages of labour we may state, may we not, that the general impression of statisticians is that the wages of labour rose very considerably from about the year 1850 to the year 1875, and that they have probably slightly fallen since?—That is the impression.

1045. (*Mr. Birch.*) In Germany, I think you said, they had risen?—I understood the last question as referring to wages generally in this country. The figures with regard to Germany which I just mentioned refer to the salaries of railway servants, not exactly to the wages of general labourers.

1046. (*Sir T. Farrer.*) In Germany, I think, Mr. Soetbeer's figures, so far as they go, go to show that wages have remained much upon a level and have not fallen at all?—I think he does not state a quotable fall.

1047. Is not this the conclusion of Dr. Soetbeer's examination of this question, that the cost of living in Germany is from 60 to 80 per cent. higher than it was before the gold discoveries?—This would be partly due to higher wages and higher retail prices, but partly also to the improved standard of life. There is no doubt that, owing to the increase of wealth, people, nominally in the same position, live now everywhere a great deal better than some 30 years ago.

1048. (*Mr. Birch.*) The excessive duty in Germany makes living very expensive?—You could hardly speak of excessive duties in Germany. Living there is still cheaper than in England, but the difference was greater formerly. Germany was not so rich a country formerly as it is now, and, of course, everything must have risen to a great extent.

1049. (*Sir T. Farrer.*) What Dr. Soetbeer says is as follows:—"Though many other observations might "be made on the general views to be derived from "the above tables, we withhold them for want of "space. The principal object of our observations has "been to point out to what great and numerous "changes wholesale prices are subject; how many "different factors exercise a decisive influence on their "formation; and how infinitely difficult it must be to "arrive at any moderately certain opinion about the "real level of general wholesale prices at any one given "time, compared with their levels in other periods of "time. If, notwithstanding these difficulties, we are "to attempt to draw some summary conclusion from "the foregoing means of information concerning "the changes in the purchasing power of gold, we "should be disposed to say, that, compared with "the time immediately preceding the recent gold "discoveries, the cost of living, proportioned to their "position in life, of the great majority of the German "population has during the most recent years been on "an average from 60 to 80 per cent. higher than it "was 30 years ago. In comparison with the period "1871–75 there is, on the whole, no farther rise to "be proved. The general level of prices in the "wholesale trade in the last five years appears in "comparison with the time before 1851 to be about "18 per cent. higher; but in comparison with the "period 1871–75 to have fallen about 12 per cent. "Any such assumptions must however be accepted "with all caution as only approximate estimates."

1050. (*Mr. Birch.*) Is that the price with the duty?—It refers to the Hamburg wholesale prices without the duty, on the average of the last five years.

1051. Prices of services, if one may call it, are quite as important when we wish to compare what gold has to do with the supply of gold as the prices of goods, are they not?—I believe the inquiry should mainly extend to the prices of wholesale articles—agricultural and mining—to which on the whole the same laws apply as to the production of gold and silver; and I think, if I may touch a theoretical part, that wages and many other expenses depend very much upon capital, and that so long as the capital of the country increases at the same ratio as population perhaps you will not see a very strong fall in wages.

1052. Still we are now concerned with the actual effect of gold prices paid for particular things, and for our purpose, that is to say, the relation of gold to different things, the relation of gold to services is quite as important as the relation of gold to commodities; do you not quite agree, or do you not wish to express an opinion? For instance, the price of goods went up, the wages went also up, and if we had to get perhaps the same prices for commodities that we had 10 years ago wages would probably have risen?—It is quite possible that wages would have risen perhaps for the same reason that they have not materially fallen now; the increase of commodities has been larger than the increase of population, causing a greater demand for labour until the last few years, when in many branches the demand fell off. Had prices been maintained it would no doubt have been more satisfactory to all producing classes, to the vast majority of the people. The more we deviate from the wholesale prices, in the direction of retail prices, wages, professional services, and ultimately of fancy prices for art treasures, the greater the influence of custom and of the amount of capital. We cannot simply reduce everything to the supply of the precious metals, and speaking of prices generally we cannot, therefore, lay down a mathematical rule. Certain prices may remain nominally the same and yet the quality we obtain may be different. Wages for ordinary labour and salaries may not fall, but the advance for greater skill and experience may be less. Actual prices of some articles or of certain services may remain unaltered, but the number of those willing to continue paying these prices, and hence of those obtaining them, may change, and the total sum paid may therefore be altered. It would be impossible to arrange statistical comparisons for everything that may come under the term of "prices."

1053. I did not quite understand what you meant with respect to the increase of commodities. Would you kindly explain what the argument is?—You mean generally. The purpose of my inquiry into the increase of commodities was to find out whether it is very much larger than it used to be in former periods.

1054. Whether there was a much larger quantity of commodities?—Whether the increase of commodities since 1873 was very much larger than the per-centage of former years, and I found that from 1849 to 1860 we had an increase in this country of 30 per cent., and from 1860 to 1873 of 37 per cent.

1055. I will take your facts. I am not inquiring how you got at those facts, but assuming that there is 30 per cent. or any other figure of increase, what deduction do you draw from it?—I was going to say, I wanted to prove that the increase proportionately was not larger than in former periods. While in former periods the quantity of money, gold and silver, was constantly increased it was possible to maintain a certain price level for about 25 years, and now we have no such increase in the monetary circulation while we have an increase of production at the same rate as formerly, and by that I want to prove that if we had kept up the same supply of money we might possibly have maintained the former price level on the average, or that the fall would have been very much smaller.

1056. You say that in former times the supply of gold has kept pace with the increase of commodities and then prices kept up, but now the supply of gold has not kept pace with the increase of commodities and therefore prices have fallen; that is the argument, is it not?—That is my argument.

1057. (*Mr. Fremantle.*) You said just now, I think, that the demonetisation of silver had caused the fall in prices?—The insufficient increase in the quantity of money, whether it is gold or silver, was caused by the diminution of gold and the demonetisation of silver. Germany had a silver currency, and France used to coin silver also, and now both and other silver

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and bi-metallic countries have given up the coinage of silver.

1058. (*Mr. Houldsworth.*) On that point, do you consider that a new demand for gold, such as occurred in Germany when silver was demonetised, affects the position of gold as a standard of value?—Yes, it would. Like any demand for an article, it would increase its value.

1059. Even if it came from hoards or reserves or ornaments?—No, not then.

1060. Then where does it come from if it does not come from hoards or reserves or ornaments when there is a new demand?—Well, in this case it came from the new production, but if that new production had not been sufficient it would have been taken out of the currency of other countries. I do not consider that a source.

1061. But if it came from hoards or reserves or ornaments, it would not affect the standard of value?—You do not mean the bank reserves?

1062. Yes, I mean any reserve of gold from any place except new production?—Well if it came from regular hoards, or from manufactured articles, of course it would be like a new supply; but if it was taken out of banks, where it was held as a reserve against liabilities, it would affect the standard of value.

1063. To put it another way, supposing this new demand had sprung up when there was no additional production at all, and had been supplied, would you have called that a demand that altered the position of gold as a standard of value?—Yes, I should call it so; because if gold were not produced then it would have to be supplied out of the currencies of other countries.

1064. And that would have altered the position of gold all over the world as a standard of value?—Decidedly, unless the gold taken from other countries was replaced by silver or paper money circulating at the same value as gold, or that a system was invented economising money to the same extent as the amounts of gold exported.

1065. (*The Chairman.*) It would have appreciated gold in fact?—It would have appreciated gold.

1066. (*Mr. Houldsworth.*) And yet the gold was in existence before?—It was in existence, but the countries whence it was taken would have to transact the same business with less currency. As it was, the whole new supply has only served to meet the extra demand of various countries. Perhaps the quantity of gold in other countries has not diminished, or has only slightly diminished.

1067. You said, I think, that the increase of the supply of gold has not been as great as the increase in the supply of commodities, and therefore prices have fallen?—Just so.

1068. If the supply of gold had been as great as that of commodities of course prices would have remained?—Prices might have remained practically the same or the production of commodities might have still further increased, if this would have been possible.

1069. (*Sir J. Lubbock.*) In reply to Mr. Birch, just now, with reference to banking facilities, you referred to the fall in the transactions of the London Clearing House, but you did not, did you, intend to imply that that was owing to any change in the banking facilities given in London?—No, I only wanted to imply that any great advance in the use of cheques cannot be proved from the Clearing House returns. Of course prices have fallen so much that now the amounts are smaller, but on the other hand, the quantities of commodities are much larger.

1070. But do not you think that that fall in the amounts is entirely due to the fall in prices, and the diminution in the Stock Exchange transactions, and has no reference whatever to the amount of banking facilities?—I lay no stress on the actual decrease of the London Clearing House; there were certainly more speculation and larger Stock Exchange transactions in 1873, while the fall of prices is to some extent balanced by the larger quantities. I do not speak of a reduction of banking facilities, but I cannot find a very important advance, as banking was certainly well developed in this country 15 years ago. The present stock of gold bullion and gold and silver coin in Europe and North America is estimated at about 1,000 million £, and including paper money there has been practically no increase in the monetary circulation for the last 15 years. Now, if the increase had gone on at the rate of 15 million £ a year, as it is assumed to have been between 1850 and 1870, we should have had an addition of 225 million £, or in per-centage very much the same as the increase of commodities. What I wanted to imply is that I cannot see an advance in banking facilities in Europe and North America to such an extent as to make up for even a moderate proportion of these 225 million £.

1071. Are you conversant with the operation of country clearing?—I am not so well acquainted with that.

1072. I daresay you are generally aware that the introduction of country clearing has led to great facilities in the collection of country cheques?—Yes, I know, but I believe there are no figures published.

1073. And though it has not affected the question of the amount referred to by you just now, still in this country it has had some appreciable effect?—Yes, it may have had some effect.

1074. But speaking generally, so far as foreign countries are concerned, you are of opinion that there has been no great advance in banking facilities?—There is no great increase, although they think that in Germany the transfer system which the German Imperial Bank has introduced is the cause of a great economising of money. But I do not consider it is to such an extent, because in consequence of the introduction of that system the deposits of the bank or the current accounts of the customers have increased, and the bank always holds about 50 or 60 per cent. of its liabilities in cash. The convenience may be very great, but as the deposits, and, consequently, the cash reserves, have increased, the actual economising of money cannot be very important. Besides to a great extent from one town to another the transfers simply take the place of bills of exchange.

1075. (*The Chairman.*) So that the money instead of passing from hand to hand goes into the reserves of the bank, and is as much required as it was before?—Yes.

1076. (*Sir J. Lubbock.*) Sir Thomas Farrer asked you some questions with reference to the high prices in Germany which are obtained by combinations among manufacturers. I did not quite understand from your answer whether that had been in operation for any considerable time?—I am not fully acquainted with the fact, but I am told that it had been done in the case of steel rails in Germany and of copper in the United States.

1077. Supposing that it refers to any particular article in which the combination had been in operation for some time, then although it would affect the actual price it would not affect the curve, would it?—Well, it might affect it. It might depress prices here, but of course there are all kinds of influences, and as to the index numbers we must take it for granted that these influences level each other.

1078. Yes, but it might be that although the general level would be higher the fluctuations would still be the same in the two countries?—They might differ to some extent, if they are influenced by duties, but where they are free of duties, as at Hamburg, the fall is very much as it is here.

1079. Then the system being altogether an artificial system you would hardly think it possible to lay down any general rule as to the effect it would have on general prices?—It cannot be done; we must take international prices free of any interference of the State.

1080. And you would consider that the London prices being independent of such artificial operations would on the whole be the best guide to follow?—I should think so.

1081. (*Sir T. Farrer.*) Suppose that the quantity of these articles sold in the United States is as great as the quantity sold in England, would not the effect

of those transactions upon the relations to gold be exactly as great as the effect of the transactions in England, and would not the relation of gold to the commodity vary although it was an artificial reason that raised the price?—I should say that in the long run the curve would remain very much the same. If an alteration takes place it might have an influence.

1082. But we are dealing with the actual prices, are we not, in these wholesale prices?—Just so.

1083. We are dealing with the relation of commodities to gold, therefore you must take the actual prices, must you not, without going into causes?—But they are influenced by duties. The per-centage of fall or rise may be different. Of course, not all prices rule alike in different countries, but those of international commodities, easily transportable, cannot, allowing for difference of freight and duties, vary much at any one time, though in many respects the gradual course of prices may show some difference; if, for instance, a country is, in the case of a certain article, changing from an exporting to an importing country. The influence of this and of State interference is clearly seen by a comparison of the prices of wheat in France and Germany with those in England during the last 100 years. Articles difficult to transport, wages, &c., may show some difference, according to the stage of development of various countries. Other things being equal, a country having for some reason or other higher prices would require more money for its transactions. With regard to America, I may mention as a fact that wholesale prices have fallen 29 per cent. as compared with 1870–72.

1084. (*Sir J. Lubbock.*) It was this I wanted to arrive at, that if you have countries where you have duties which may change, rings which may be broken up one day and reconstituted the next, the prices there do not give you so good a basis of calculation as the prices in some free market like London, where you are not influenced by duties or combinations?—Just so.

1085. Sir Thomas Farrer also asked you some questions with reference to retail prices. Now, supposing they were obtainable, have you any reason to suppose that they would affect the conclusions to which you have arrived in your memoir?—I think the retail prices have, on the average, fallen less than the wholesale prices. All my arguments refer to the 45 wholesale commodities. If other commodities have fallen less, the result has to be modified to some extent.

1086. But you have no reason to suppose that if you could have arrived at tables of retail commodities that would have affected the conclusions to which you have come?—I do not think it would have affected them to a large extent, because there is no doubt that retail commodities have fallen also.

1087. (*Sir T. Farrer.*) Is it not the case that at Magdeburg, the great sugar market, the price of sugar to the German consumer is exactly the price to the English exporter plus the bounty? That is in one of the consular reports?—That would be the wholesale price? I should say that is correct.

1088. (*Mr. Barbour.*) Did you say, in reply to Sir T. Farrer, that you thought that for the purpose of an inquiry such as the present one retail prices were as important as wholesale prices?—Well, of course, retail prices would also have to be considered if you come to the purchasing power of gold.

1089. Retail prices are much more a matter of custom than wholesale prices, are they not?—They are a matter of custom in many ways, and, as I said before, in many ways such prices are influenced by the amount of capital.

1090. My question was, they are much more determined by custom, at any rate, for some time, than wholesale prices are. Wholesale prices are determined in the open market, and retail prices, to a certain extent and for a limited time, are determined by custom?—Oh, yes.

1091. Therefore, wholesale prices would show the working of the general law much more readily than retail prices?—Yes, they would.

1092. (*Mr. Birch.*) They would show it sooner, but retail prices, in the long run, would show it better. I did not, however, understand what special reasons there are for retail prices not being affected as much as wholesale. They are not, of course, first; they take time; they neither rise nor fall for a long time because it must be known all over the country before it takes place. But it takes place both ways, because, supposing a man in the country has laid in sugar very cheap, he constantly continues to sell his sugar cheaper, even when the price goes up; and exactly in the inverse ratio, if he has bought his sugar very dear, he does not begin to reduce his price so soon. It goes on more slowly. But the retail prices are of very great importance as affecting wages, what a man can live upon?—Yes.

1093. (*Sir T. Farrer.*) This is rather a theoretical question, but as regards that part of the precious metals which is used in circulation, and not in the reserves, retail prices and wages must have a much greater effect upon it than wholesale prices, must they not, because more of it is used in those transactions?—Yes, more of the coin is used, certainly. It is very difficult to arrive at the exact mode how it is acting, but we must suppose in the long run, if the transactions increase and the mode of payment remains the same, and there is no increase in the supply of money, that prices must fall. Of course it can only be seen in a general way.

1094. (*The Chairman.*) The tables you have put in are not merely a reproduction of those you have given in your pamphlet, but they represent the results of a more elaborate investigation carried out upon the same lines?—Yes, but only for the average of the period of 11 years 1867 to 1877, and for 1885.

The witness withdrew.

Mr. D. M. Barbour examined.

1095. (*The Chairman.*) We desire, as we are investigating the question of the demand for precious metals, to ask you for such information as you can give us on the question of hoarding in India. You have had a very long experience of that country, have you not?—I have had 20 years' experience.

1096. Can you tell us what special opportunities you had in India for investigating financial questions connected with that country?—For about eight years I was employed in the interior of the country, partly as a magistrate and partly in the collection of the revenue, and so I saw a good deal of the habits of the people closely. After that, for about 12 years, I was generally employed in the financial department of the Government of India For the first eight years of my service I was in close contact with the people every day.

1097. Have you given much attention to this special question of hoarding by the natives?—I have given a good deal of attention to it.

1098. Then you do concur with the general opinion expressed by most observers that there is always, and has been, for centuries, a very large amount of hoarding among the natives of India?—It is beyond question that there is a large amount of hoarding both of gold and silver.

1099. What form does that hoarding take?—Gold and silver are hoarded in the form of bullion or coin, and frequently the metal is made into ornaments, and partly used for the purposes of ornament and partly kept as a hoard; it is impossible to discriminate between the use of gold and silver as ornaments and their use simply for the purposes of hoarding.

1100. Practically, I suppose when a native desires

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to save money he is comparatively indifferent whether it is in the form of a hoard in the earth in some hidden place, or whether it is in the form of jewels?—I think he prefers it as a rule in the form of ornaments for his family, because it is a hoard, and it is also a source of gratification to them to possess these ornaments.

1101. Is that because it is more easily converted when it is in the form of jewellery, or simply because it pleases him?—I think simply because it pleases him that his family should have ornaments.

1102. Can you give us any estimate of the amount of such hoarding?—I do not think it is possible for anybody to give exact figures, but we know that 130,000,000*l.* of gold have been imported, net, by sea since 1835-36.

1103. By net imports of gold, you mean imported and not exported?—Imported and not exported, and there has no doubt been a certain amount of import and export by land, but I think that may be neglected.

1104. It is comparatively trifling?—It is trifling as compared with the imports and exports by sea. There was no doubt a large amount of gold in India before 1835; how much I do not know.

1105. As none of this is used for coin in India, the whole of it must either be lost or used in manufactures or hoarded; is that not so?—Speaking generally, that is the case; but there is a portion of it in the form of coin, and perhaps, to some extent, and in a certain sense, it may be said to circulate.

1106. (*Mr. Houldsworth.*) You are referring to such pieces of gold as we saw here. Mr. Pixley showed us a small bar?—I refer to gold in the form of coin rather than to bars.

1107. (*The Chairman.*) But that does form a kind of currency to whatever extent it is used, I understand?—To whatever extent it was used it would be a form of currency; but I do not think gold is used as currency to any great extent.

1108. What you speak of is used to a larger extent?—I do not think gold coin is much used either. I may explain that there is a large trade in gold in India. A large quantity of gold is imported every year and is distributed throughout the country. The dealers in gold receive gold from Calcutta and Bombay and sell it in small quantities to people who want it, generally goldsmiths, and, of course, a banker, or a man dealing in gold, if he has a transaction with anybody else, will be ready to take gold in payment. He knows the market value of gold, and is able to make a profit out of the transaction, but, in the ordinary sense of the word, there is no circulation of gold in India.

1109. But would a merchant treat gold in a different manner to any other merchandise in common demand; would he not take gold in payment of a debt?—A merchant, and especially a banker, would no doubt be more ready to take gold than ordinary merchandise in payment of a debt, because it is easily handled, and does not deteriorate by keeping, and because the market ratio is known day by day and fixed very closely.

1110. Still, practically, we may ignore the amount of gold which is used as currency?—I think so; but India is a very big country, and nobody can speak for the whole of it; so far as my information goes, you may ignore the circulation of gold as currency.

1111. You cannot even give a conjecture as to the proportion of this 130,000,000*l.* which is now in that form of hoard, but it must be nearly the whole amount?—I should say nearly the whole amount.

1112. And that in addition to whatever was hoarded during previous centuries?—Yes.

1113. Could you give us any estimate of the amount of silver hoarded in India?—From my personal experience and observation I should be inclined to say that the amount of silver hoarded, excluding current coin, was greater than the amount of gold; but I made some inquiries, on the results of which I do not place much reliance, which go rather to show that the amount of gold hoarded is larger than the amount of silver, if current silver coin be excluded from the silver hoarded.

1114. Why should you exclude the current coin?—Well, because I have found it impossible to say as regards current coin what portion of it was hoarded, and what portion of it was intended to be put into circulation in ordinary course.

1115. But I suppose a considerable amount of the hoarded silver would be in the form of coin?—A very large amount certainly.

1116. So that, according to your own observation, the amount of silver hoarded must be very much in excess of the gold hoarded, because the amount of gold hoarded is equal to the amount of silver, and we have to add to that the amount of silver hoarded in the form of coin?—I should say the amount of silver hoarded in all forms was decidedly greater than the amount of gold.

1117. Then the total amount of hoard since 1835 of the two metals together can hardly be less than 300,000,000*l.*?—I do not like to speak to exact figures in such a matter, but I should say the amount hoarded approaches 300,000,000*l.*

1118. (*Mr. Houldsworth.*) What is the exact amount that you say is hoarded of silver not in the form of coin?—Nearly equal to that of gold. Of course I speak from the best information that I could obtain.

1119. (*The Chairman.*) You do not profess to speak from accurate statistical data, but from the best information you could obtain?—That is so.

1120. Then if we are to accept Dr. Soetbeer's rough estimate of the total amount of coinage in circulation in the world, the hoarding in India alone would very nearly amount to one-third of that. If I am not mistaken Dr. Soetbeer puts the total amount of coin in circulation at 1,000,000,000*l.*, and you put the total amount of hoarding in India roughly at 300,000,000*l.*?—I should say that the hoarding since 1835 approaches 300,000,000*l.*

1121. In other words it almost equals one-third of the total amount in circulation?—Yes.

1122. Of course hoarding may mean two rather different things. It may mean money put away, as people say, in a stocking, which will certainly be drawn out by the bribe of a high rate of interest or some other inducement, or it may mean hoarding which practically nothing likely to occur will ever throw upon the markets of the world?—Of course you may define hoarding in various ways.

1123. In what sense do you use the word hoarding when you tell us that it amounts to about 300,000,000*l.* in India?—I use it in the sense that the gold and silver are withdrawn from circulation without any intention, unless under very special circumstances, of returning them to circulation again.

1124. And, practically, nothing but a case of necessity, like famine or war, would induce those who are hoarding the money to turn it into coin again?—Nothing but some special circumstance; war would probably have the effect of increasing hoarding. A change in the habits of the people, if it should happen in the course of time, would bring gold and silver forth from the hoards.

1125. But no mere inducement of profit, no fall in the price of commodities or increase of the normal rate of interest, would have any effect in diminishing the amount of hoarding?—Not within any limit of the rise of the rate of interest that you can foresee, that you can treat as practical. I have little doubt that a very large increase of interest would draw forth something, but the increase of interest would be so great that practically you need not consider that portion of the question.

1126. (*Mr. Houldsworth.*) Famine would draw it?—Famine is the chief cause.

1127. Famine would draw it all—I mean if the necessity arose?—You can hardly conceive famine throughout the whole country.

1128. Well, I mean wherever the famine was that it would draw out up to the amount of the necessities. It

is in a form that they could convert into commodities if they were in the position to absolutely require it?—At a certain sacrifice they could.

1129. And I suppose they would do it?—They have done it.

1130. (*Sir J. Lubbock.*) Is there any large amount which is actually lost, which previous owners have hidden away, or do you consider that the great bulk of it could be brought forth again if it was necessary?—I do not think that much of it has been lost in that sense—hidden and could not be found again. A portion has, no doubt, but I think that a considerable amount of gold is used in manufacture in India, and is practically lost for ever. I could not give you figures, but I have had information to that effect.

1131. (*Mr. Houldsworth.*) In what form is it lost; does it go into articles that never would be converted?—Well, I was informed that in Delhi there was a consumption of gold in connexion with "pawn." It is a custom at ceremonies among the natives of India to give you what is called "pawn," which is the signal for you to leave after an interview, and there is some gold used for ornament in connexion with this. I was informed by a gentleman that 100*l.* a day in gold was used in Delhi alone in manufacture connected with "pawn," which was lost for ever.

1132. Would not the recipient of it take it and keep it?—It is so trifling that he would not do so.

1133. Might I ask you if you think there is any absorption in the temples, or in worship, or in some form that, at any rate, would not be so easily drawn out, even in the case of famine?—I cannot speak on that point from my own experience, but I have heard that, in Southern India especially, there are considerable stores of gold and silver connected with the temples.

1134. Which are considered sacred, I suppose?—I fancy they would only come forth under great pressure.

1135. (*The Chairman.*) In illustration of the definition you just gave of hoarding, is it not the fact that the high prices of cotton caused by the American war extracted a very small portion of these hoards, while a case of exceptional necessity like famine extracted a considerable portion of them?—The high price of cotton tended the other way; it led to a large addition to the hoards.

1136. Can you give us any facts or illustrations of the procedure of the natives in regard to hoarding?—A short time ago I had an estimate prepared of the amount of silver that went to Simla, and that went to Simla because the Government had large payments there to make to its officers, Simla being the summer head-quarters, and partly for payment on account of European troops stationed in the hills. The figures of the amount of silver that went there from 1861 to 1886 are perfectly accurate. They are the official returns of the amount of silver sent there, and they come to 6 krores 64 lacs, or, using the ordinary notation, 6,640,000*l.* (*See* Appendix V.)

1137. Then how much of that money reappeared in circulation?—There is no definite flow of silver from Simla; there are no remittances of silver to any considerable extent that you could put your finger on, made from Simla, and from the hills, and the only money that leaves the hills to go back to the plains is money taken down in small quantities by small traders, or taken, perhaps, by domestic servants.

1138. What proportion of the total amount sent to Simla do you estimate reappears in this way?—That is the weak point in the estimate, but I thought, and the gentleman who made the estimate thought, that one-third would be a very liberal allowance.

1139. So that in 25 years two-thirds of 6,640,000*l.* worth of silver have been absorbed by the native population living in Simla?—I should not say absorbed by the population living at Simla, but living at Simla and in the hills. A good deal of it goes a considerable way into the hills.

1140. Have you any ground for thinking that the inhabitants of that district are more given to habits of hoarding than the people in other parts of India?—I think the people in the hills are rather more given to hoarding than the people in the plains, and I think the people in the neighbourhood of Simla have had special opportunities for hoarding in recent years; of the money which has remained in the hills quite an inconsiderable proportion is in circulation.

1141. You say that hoarding is less practised in the plains than in the hills. Is that owing to the fact that the people in the plains are more civilised, more advanced as a community?—That may be the case; it may be from that reason.

1142. Then do you anticipate that any change is going on in the habits of the people of India which will greatly diminish this habit of hoarding?—I do not think any change is going on which will greatly modify the habits of the people in any time to which we can at present look forward, but it is a fact that, since the institution of our system of Post Office savings banks, a considerable amount of money has been coming into the savings banks, and it is a fact that capital owned by natives of India has been pretty largely invested in cotton mills in the Bombay Presidency. But I think the habits of the great bulk of the people are the same as before.

1143. If this question is considered from the point of view of the relative prices of gold and silver, I imagine that if the natives did cease to hoard, and threw their accumulations upon the market, the result would not be to alter the prices of the two metals, since the amount of hoarding of the two is about equal?—It is very difficult to say what the effect would be, because if that money was brought forward on account of a change in the habits of the people, it would probably be invested in industrial enterprises of various sorts, and it would bring about a sort of revolution in commerce.

1144. I will put my question in another way. The demand made by the population of India upon the metallic supplies of the world does not affect the relative prices of gold and silver, because it is about equal of the two metals?—That may be the case.

1145. Can you give us any facts which tend to show that hoarding on a very important scale goes on at the courts of the native princes?—Yes; it came to notice recently, on the death of the Maharajah of Burdwan, that there was a large hoard. How much gold and silver is hoarded I cannot say, and probably no member of the family could say. I have got a letter here which contains the whole of the information available on the subject. In recent years 230,000*l.* of silver was withdrawn from the hoard of the Maharajah, but that was not the whole amount. The silver coins withdrawn must have been coined before 1835, because they were Sikka rupees, of which none have been coined since 1835. (*See* Appendix V.)

1146. What is a Sikka rupee?—It is a rupee which was formerly current, and it was of a higher value than the rupee of the present day. As the rupees withdrawn were Sikka rupees it may be inferred that they were hoarded a good many years ago.

1147. That confirms the conclusion to which you came on other grounds that an immense amount of the hoarding in India is anterior to the year 1835–36, at which your statistics of the import of the precious metals began?—No doubt there was hoarding before 1835. I have also got a report made by an officer of the Post Office in 1886, which shows that a native prince is at present hoarding gold at the rate of 40,000*l.* or 50,000*l.* a year, and on the death of two native princes recently it was believed that they had left 4,000,000*l.* each. The best evidence I could get went to show that they had left 4,000,000*l.* each, but the evidence is not very good. They certainly left large hoards. I cannot say how much was in gold and how much in silver; but I may say, as an illustration of the tendency to hoard, that one of those princes took a loan from the Government of India in 1877 of 500,000*l.*, and at that time he must have been in possesion of a large hoard himself. But it is very

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often a point of honour with the family not to break into the hoard, and they prefer to borrow rather than to touch the hoard.

1148. (*Mr. Fremantle.*) It is of the nature of settled property?—Well, it is treated like a family picture, I think, not to be sold if possible. The whole of the loan taken by the prince to whom I have referred is not repaid yet; but last year, when he had to make a payment to the Government of India for a purpose in which he was interested, and he was asked when he could make the payment,—a payment of 150,000*l.*,—he said "at any moment." That is, he had no difficulty in paying 150,000*l.* at a moment's notice.

1149. (*The Chairman.*) You tell us that in times of famine hoards are invaded?—That is certainly the case.

1150. Have you any estimate of the amount which was extracted from these hoards in any given district during a period of famine?—It is quite impossible to say. All that we know is that certain amounts were brought to the Bombay Mint for coinage, a certain amount in the form of ornaments, but that must be very much less than the amount that was brought out of the hoards, because the man who drew silver from his hoard would ordinarily pledge it in the first instance with the native banker or money-lender, and the native banker might either sell that silver again, if he obtained final possession of it, or he might send it to the Mint. (*See* Appendix V.)

1151. And that excludes gold altogether?—The return for the Bombay Mint excludes gold; but we know that in the years of the great famine in Madras and Bombay, a large amount of gold was sent from India to England, and I think Sir H. Hay said he received a quantity of gold from India which was evidently composed of ornaments melted down.

1152. (*Sir T. Farrer.*) And this does not include hoards in the form of rupees?—Certainly not.

1153. (*Sir J. Lubbock.*) They would then be coins of a certain age?—Do you mean those that were brought to the Bombay Mint? They might be coins of some age or they might not. Many of the native states have the right of coinage to the present day. Their coins are not legal tenders, as a rule, in British India, but they might not be very old coins.

1154. (*Mr. Birch.*) To what do you attribute this system of hoarding, because generally the stable government we are supposed to have in India just now would bring them out. Can you give me any idea?—Well, I ascribe it to the same cause as Sir C. Trevelyan, who says it arises from habits induced by ages of mis-government.

1155. Then with good government it is to be hoped the hoards will come out. You said just now, I think, that you cannot raise loans in India; that it is very difficult indeed except at a high rate of interest; but you see the French Government got hold of a good many hoards by offering loans at a tolerably cheap rate, not a high rate of interest, and in very small amounts. Has that ever been tried in India?—That has been tried in India in recent years. It was tried in 1882, but was an entire failure.

1156. Then it is difficult to know how to get at them. With regard to the gold in the native states, it is not a legal tender, but it circulates, does it not?—I should say it does not freely circulate, but no doubt a native banker, or a man dealing in gold, or dealing in gold and silver ornaments, would take gold at a certain price.

1157. "An Indian" says:—"A portion of gold "and silver imported into India is no doubt exported "by land routes to Afghanistan, Persia, Nepaul, &c. "But the import of gold into India is mainly caused by "the large body of the Anglo-Indians who are tem- "porarily residing in India and by the steady stream "of Anglo-Indians coming to and leaving India. "Being naturally apprehensive of a further fall and "uncertainty of silver, they try to collect as much "gold as possible and take it with them when they "leave India for England. When they come to this "country they come with hands quite empty, but "they leave India after making due provision for the "remainder of their life. What is more probable "than that they collect a part of their savings in gold "while they reside in India for utilising at home?" That, of course, is very largely exaggerated?—I do not think there is any foundation for it at all. An Anglo-Indian does not accumulate gold in India. I never knew anybody who did.

1158. (*Mr. Fremantle.*) Nor does he take gold with him?—Nor does he take gold with him. If he has saved any money he buys a bill, or employs any of the ordinary means of remittance.

1159. (*Mr. Birch.*) Do the exchange banks in India hold a large quantity of gold in deposit?—No; so far as my information goes it is not the case.

1160. Because, to a certain extent, that would be utilised?—I am not aware of their holding gold on deposit. It is possible that a wealthy native merchant might take a loan from a bank, pledging gold or gold ornaments.

1161. Could you give us any idea as to whether, with respect to labour, the value of silver has decreased in India?—I do not think I could give you any information except of the most general nature; it is, perhaps, not worth while taking my evidence on this point, but I can give you the opinion I have formed from certain inquiries I have made.

1162. (*The Chairman.*) I think you might give it in a general form?—Well, I think that the wages of labour have risen in the large towns and along the railways, and in places where large manufactures have been started, and especially the wages of skilled labour. As regards the great mass of the people, I do not think there has been much change, and very often the labourer is paid in kind, paid by produce, so that one could not say that the money wages had risen or fallen. I have made some inquiries as to the cost of carrying the mails by runners; I applied to the head of the Post Office, who obtained from the auditor of the Post Office accounts a statement of the wages paid to what are called postal runners, and I found very little change in the rates. I will put in a paper giving those rates. It goes back for a considerable number of years. There is a rise in the rates up to, I think, about 1870 or so, and since that there has been very little change—a slight tendency to rise. (*See* Appendix V.)

1163. (*Mr. Cohen.*) Would you attribute this hoarding to a deficiency of banking system in India in the remoter towns away from the capitals of each Presidency?—I do not think that the introduction of facilities for banking would much affect the habits of the people in this respect.

1164. Is there a system in India which obtains in this country, and all the other countries of Europe, of taking money on deposit by the different banks?—The European banks certainly do so.

1165. From natives?—They will take them from anybody.

1166. Yes, but do they get them from natives, I mean?—Well, I think the hoarding as a rule is by men who hoard so little individually that no bank would accept their deposits, nor would they themselves be willing to deposit their money in a bank.

1167. I have understood,—perhaps you will correct me if my question is wrong,—I have understood that the post offices throughout India have the same system of investment in Indian Government securities that the English post offices have in English Government securities, and also for taking money for savings banks; is that the case?—I do not know precisely what the English system is, but the Indian Post Office takes money for savings banks, and it will invest money for the public in Government paper in small sums.

1168. Has it had any effect at all in diminishing the tendency to hoard?—The deposits in the savings banks have increased considerably in recent years, but I do not think that the system has had much

effect upon the habits of the people generally in the matter of hoarding.

1169. Do you think that the people would accept notes payable in silver throughout the country?—There are notes payable in silver at present.

1170. Not of small denominations?—They go as low as five rupees.

1171. And it has had no effect in diminishing the tendency to hoard the metal?—I think it has had very little effect.

1172. Do you think it would have any effect if the Indian Government were to do away with the seigniorage for coining metal which is now two per cent.?—I do not think that would have any effect.

1173. It would not promote the circulation of money and prevent hoarding, you think?—I do not think so.

1174. Do you think it would have an influence upon the disposition to hoard if there were a currency common to India and the rest of the world, either by general bi-metallism or by giving India a gold currency?—I do not think it would have this effect to any material extent, because the hoarding depends on the disposition and habits of the people, and by introducing one form of currency rather than another you do not change the habits and disposition of the people.

1175. Can you say that the disposition to hoard has increased or decreased of late years by the spread of railways and the opening up of communications. Is there any diminution in the tendency to hoard?—We know that the deposits in the savings banks are increasing, and we know that capital owned by natives of India has been invested in cotton mills and other mills, and I should say that the tendency was for the habit of hoarding to diminish; but so far as regards the great mass of the people the effect has been quite inconsiderable.

1176. You will agree that this is a very serious question, because with the increased productive capacity of the country they may hoard all the money in the world if they go on at the rate you speak of. You do not think that any of the suggestions which I have mentioned would diminish this tendency?—Nothing I think will diminish it but time and good government.

1177. Turning from that to another subject. I have alluded to-day to the movements of prices in this country oscillating with the movements in the silver market. I think you have prepared a diagram illustrating that very well. Would you have any objection to put that in?—I will put it in. (*See* Appendix V.)

1178. It gives the price of silver in European markets as compared with the general prices of commodities in our markets for the last 25 years?—If you will allow me I will explain how it was prepared. It gives the general prices according to the index numbers of "*The Economist*" for the 1st of January in each year, and the price of silver for the 1st of January of each year in the London market.

1179. The last question I would ask you is this. You have seen the tables prepared by Mr. Palgrave as regards the purchasing power of silver in India for the last 25 years. Do you agree in their being correct?—I have not specially tested them, but there is no doubt, speaking generally, that prices of the ordinary commodities, of the ordinary articles of food, for instance, are now as low as they have been on the average of past years.

1180. (*Sir T. Farrer.*) You know how they were collected, do you not, the figures in those tables?—I have a certain amount of information regarding them.

1181. And it is such as to lead you to think that they are generally correct?—I think that they are sufficiently correct to give a good indication of the general course of prices. I should not like to say that they are correct in every individual instance. Mr. Giffen called attention to the great difference in the prices of Jowar, as shown at Surat and Ahmednagar, when he was examined the other day. I was not at the time able to explain the difference from personal knowledge, but I have consulted a gentleman who is familiar with those places, and the reason he gave was that Ahmednagar, when prices were very low, had no good means of export, while export from Surat by sea was easy and cheap. This was the case up to the year 1880, I think, when Ahmednagar was connected with the system of railways, and since 1880 the difference in prices between Surat and Ahmednagar is much less than before. He also added that he found, from his experience in India, that any considerable import of grain from one place to another often had a very marked immediate effect on prices, and it did not follow because there was a considerable difference in price that a man could safely undertake a speculation in grain. That explains the particular point brought to notice by Mr. Giffen, the difference in prices in Surat and Ahmednagar; up to 1880 there was practically no good means of communication between the two places, and since 1880 the tendency has been for the prices in the two places to be equalised.

1182. And that rather confirms your notion that the tables may be generally relied on?—As indicating the course of prices they may be generally relied on.

1183. In regard to this hoarding, do you think that these hoards are kept by the persons who make them. They are not lent out to local people, are they?—They would not lend out a hoard. Very often a man has saved money and lends that out.

1184. But would that be included in what you call hoarding?—No, I should not call that hoarding.

1185. You would call that in circulation?—Yes, in circulation. Of course the rapidity of circulation varies very much.

1186. But there is a great deal of local money-lending?—There is a great deal of local money-lending on a petty scale, but it is not always done in coin. A money-lender advances to a cultivator so much grain, and the understanding is that he is paid back in grain with a certain addition at harvest time.

1187. That mode of lending rather interferes with investments in public securities, in loans, does it not?—Oh! certainly, because the rate of interest obtained in that way is much higher.

1188. So that the persons disposed to invest, invest rather in these loans than they do in the public loans?—Certainly.

1189. What belongs to these money lenders is something entirely different from the hoards of which you have been speaking?—Yes, I call that different from the hoards.

1190. (*Mr. Fremantle.*) Can you form any estimate of the capacity of India for hoarding; that is to say, what is likely to be the addition to the hoards yearly?—I have thought of that, and I think it very much depends upon the ability of India to purchase the precious metals. The desire of the people to possess gold and silver is very great indeed, but their means of paying for the two metals is limited.

1191. But their desire to hoard is only limited by their capacity to pay for the precious metals?—Well, their desire for money is like that of other people.

1192. Could you give any estimate of the importations of sovereigns into India?—No, I could not; but there is a considerable import of sovereigns, and always has been, I think, for many years.

1193. Do you think that the people who hoard have any marked preference for gold or silver?—I think as they get wealthy they prefer gold. A wealthy man will prefer ornaments of gold for his family rather than silver, and the very poorest classes use ornaments made of some base metal, neither gold nor silver. There may be some silver in it. It is very much a question of the position of the family as regards wealth.

1194. But the persons who hoard largely would naturally prefer gold?—If they could afford it I should say they would.

1195. (*Sir T. Farrer.*) The wealthier the country gets, unless there is some change, the more likely

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they are to take gold?—I should say the wealthier they are the more likely they are to take gold.

1196. (*Mr. Fremantle.*) If the gold price of silver rose, would not there be a strong temptation to part with the silver and substitute gold in hoarding?—I think that there would be some tendency in that direction. Some people say that the fall in the gold price of silver has led to the larger hoarding of gold, and if so, and if the opposite took place, I suppose it would lead to less hoarding of gold, but I do not attach much importance to these speculations myself. I think that if the gold price of silver rose, there might perhaps be for a time an increased demand for gold. I do not think it would last. With reference to this matter, I may mention that silver is rather more convenient than gold for hoarding, so long as it is the standard and the currency of the country. That is, if a native of India hoards rupees, they are more easily made use of in case of necessity than gold would be if he had hoarded that metal, because he would have to sell the gold, while he can put the rupees in circulation at once.

1197. But if that superiority on the part of silver were removed, gold might be hoarded in larger quantities than at present?—By making the standard gold, or by making gold a legal tender as well as silver, I think the tendency to hoard gold rather than silver would be increased. I think that could be the tendency, as hoarded gold could be more easily thrown into circulation than at present, and would therefore be more convenient as a reserve.

Adjourned till to-morrow.

Sixth Day.

Thursday, 9th December 1886.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. L. L. COHEN, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.

MR. GEO. H. MURRAY, *Secretary.*

Prof. Roberts Austen, F.R.S.

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Professor ROBERTS AUSTEN, F.R.S., examined.

1198. (*The Chairman.*) I think you are Chemist and Assayer to the Mint, Fellow of the Royal Society and Professor of Metallurgy in the Royal School of Mines?—Yes.

1199. You are acquainted, are you not, with the general scope of this part of the inquiry upon which the Commission are engaged?—Yes.

1200. And you have drawn up a paper, which I have read, dealing with the details of the cost of producing silver by the various methods in use?—Yes.

1201. Perhaps you will be good enough to put in the paper with which you have furnished me. It will be printed in the Appendix to the evidence, and I will try and get out in the course of examination any illustrative facts and arguments which you may be able to lay before the Commission?—If it is printed I should like to supplement it by additional details, if I may be permitted to do so. (*See* Appendix VI.)

1202. Certainly. You deal here with four processes by which silver is produced from the state in which it occurs in nature, and added to the stock of the precious metals of the world?—Yes.

1203. I suppose it would be convenient to divide those methods from our point of view into those in which silver is produced as a bye product, and those in which it is the real object of the industry, whatever it may be?—Certainly.

1204. Evidently there is the greatest difference in the cost of production, according as it is a bye product which perhaps, strictly speaking, may cost nothing, or according to whether it is the main product, in which case, of course, the miners would require at least the ordinary commercial profit upon their industry?—Exactly.

1205. Your first section deals with silver as it is obtained in the refining of native gold, and, without going into details, the conclusion you come to is that the cost of silver by that process may be estimated at the official charge which the American Mints make for extracting silver from gold which is sent to them?—Yes.

1206. Namely $2\frac{1}{2}d.$ an ounce?—I cannot see that there is any incidental charge other than this one, namely, the cost of parting and refining.

1207. Is it necessary before the gold is used for currency or other purposes that the silver should be extracted from it?—It is not absolutely necessary. In some cases a small per-centage of silver might be allowed to remain, but in practice it is always parted before gold goes to the Mint.

1208. Supposing the silver was absolutely worthless, would the owners of the gold still pay this $2\frac{1}{2}d.$ per ounce in order to get rid of the silver?—No, not necessarily, but as a matter of fact it is possible to treat argentiferous gold and auriferous silver together in the same operation, and the result is that silver is always extracted.

1209. However, practically, I suppose it would be admitted that, in the first place, the amount of silver so obtained bears such a small proportion to the total silver produced in the world that it may be neglected?—I think so.

1210. And in the second place in an investigation which is directed towards discovering the causes which alter the relative values of the two metals, gold and silver, we need not take into account a method of production which involves, as one of its results, that for every 5*s.* worth of silver an enormously larger value of gold shall be at the same time produced. I hope I have made that question clear?—Perfectly clear. This amount certainly may be ignored in the relative estimate.

1211. It is clear that however much you may produce in this way you will not depreciate silver in relation to gold, but rather the contrary?—Yes. It is merely placed in the table as a means of accounting for that amount of silver, in order to complete the evidence so far as may be possible.

1212. I then come to the second process with which you deal, according to which silver is obtained from lead. I understand your method of investigation to be this, you first take the lead ores which are richest

in silver, which are those produced in America?—Yes.

1213. You calculate the cost of mining a certain quantity of lead. You then calculate the amount for which that lead would sell in the Chicago market; and then you find out how much silver must be produced from that lead in order to make the transaction one which would involve no loss to the producer?—Precisely.

1214. And the result of your calculation is that taking one mine with another, taking the average, that is to say, between a rich and a poor mine, both being fairly typical cases, you find that 95 ounces of silver must be found on the average in each ton of lead as a minimum, in order to prevent the transaction being one of loss to the producer?—I do.

1215. But as a matter of fact, the mines in question instead of producing 95 ounces produce about 200 ounces of silver, roughly speaking?—Yes. The small amount of gold they contain being counted for the sake of convenience as silver in this particular case.

1216. So that, without taking into account minute corrections, you may say that about twice as much silver per ton of lead is produced in these American mines as is required to make the transaction one involving no loss?—That is the conclusion to which I have arrived.

1217. And as a direct arithmetical deduction from that you conclude that silver is produced in the American lead mines at the rate of about 2*s.* an ounce?—I do.

1218. That, of course, assumes that silver is worth in the open market about 4*s.* an ounce?—4*s.* an ounce.

1219. In considering these American mines, it is often hard to say, I suppose, whether silver is the bye product of lead, or lead is the bye product of silver. It is a kind of middle case between that of silver produced from gold which we have just considered and that of silver ores which we are about to consider?—Well, it would be very difficult to divide the American mines which produce lead which do pay from those which do not, and this is about a mean; it may at least be taken as a mean between the two.

1220. I suppose that if the lead did not contain silver the lead ores would not be worked in these mines?—In some cases, certainly not, in other cases it would.

1221. And if the lead was unsaleable the mines would hardly be worth working for the silver alone?—Certainly not.

1222. So that you cannot say, speaking broadly, that lead is a bye product of silver, or silver a bye product of lead?—No.

1223. They must be considered together?—And that very greatly increases the difficulty of taking account of the silver coming from such sources.

1224. In order to make it perfectly clear by what method of deduction you arrive at the conclusion that in these lead mines in America silver is produced at about 2*s.* an ounce, let me recapitulate what I understand to be your statement. You prove, in the first place, that if about 100 ounces of silver go to each ton of lead it will not be a loss to extract that lead from the mines. But as a matter of fact not 100 but 200 ounces of silver exist in each ton of lead, therefore, if silver be worth 4*s.* an ounce it is quite clear that the silver is produced at half that cost; in other words at 2*s.*?—That is my conclusion.

1225. (*Mr. Cohen.*) That is the cost of producing the silver, the actual expenses; but you have not allowed anything for capital, have you? You are speaking of the actual working expenses?—The actual money out of pocket, if I may use such an expression in this relation.

1226. (*Chairman.*) Turning then from the American mines to the European mines, the richness in silver of the European lead mines is considerably less than that of the American mines; is that not so?—Undoubtedly.

1227. In the United Kingdom instead of 200 ounces per ton the amount is only about eight or nine ounces per ton; is that not so?—Yes.

1228. In Spain instead of being 200 ounces per ton as in America, it is about 36 ounces?—Yes, but some of the rich ore is exported from Spain.

1229. In Italy it is about 67 ounces a ton?—Yes.

1230. And I think you have not given us the precise figures for Austria and Germany?—No, I have not. The question there is complicated by the importation of foreign ores. It is rather difficult to say what the per-centage of the precious metal in the native ores would be.

1231. But on the whole the conclusion you have arrived at is, that though these ores are so much poorer than the United States ores, nevertheless the cheapness of labour, and the nearness of the mines to the market, almost make up or quite make up for these disadvantages?—I do.

1232. And you are of opinion that 2*s.* an ounce represents the cost of production in Europe very much as it does in the United States of America?—I am.

1233. But however that may be, the European production is very little more than one-third of that which comes from the United States from lead?—Yes, about 8,000,000 ounces from the desilverisation of lead.

1234. Your third section deals with the method of obtaining silver from copper?—It does.

1235. But I understand that that process differs from the process of obtaining it from lead inasmuch as the silver in this case is a true bye product?—In nearly all cases.

1236. And that it would not be worth while working the copper in order to get the silver?—I may safely say that this would seldom occur.

1237. And the only question is, not whether it is worth while working the copper mines to obtain the copper, but whether having obtained the copper it is worth going to the cost of extracting the silver from it?—Precisely.

1238. And in a large number of cases it is not so worth while. Is that not the conclusion to which you have arrived?—It is certainly true of a large proportion of the copper ore smelted in Swansea. It contains silver, but it does not pay to extract the silver. Many works altogether avoid treating argentiferous ore.

1239. Then the cost of obtaining silver from copper is simply the cost of desilverising the copper?—Exactly.

1240. You do not include in the cost the expense of extracting the copper from the mine? No. The expense contemplated is that incidental to the desilverisation of the copper.

1241. You consider the silver is so purely a bye product of the copper, that the only cost you have to take into account is the cost of extracting it from the copper after the copper has been taken from the ore?—Yes, essentially desilverisation charges.

1242. And on that estimate you make out that the mean cost of desilverising copper is about 1*s.* 11*d.* per ounce of silver?—Yes, I do. The details of that estimate of cost are rather complicated. The Claudet process, for instance, produces silver at a very cheap rate; but that does not refer to a very large quantity. The silver extracted by that process only costs about 5*d.* for the ounce.

1243. But that process is not applied to copper unless the copper happens to be very rich in silver; is that so?—The process is applied usually to the residues resulting from certain chemical operations, so that it is an incidental amount rather than an important amount.

1244. So that the amount of silver-bearing copper to which this process can be applied is a very small proportion of the whole copper which is desilverised?—It is.

1245. You do not pretend, therefore, that this estimate of 1*s.* 11*d.* is more than a rough approximation?—No.

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1246. But as a rough approximation, you think that on the whole it may be relied upon?—I believe it to be fairly accurate, but I am of opinion that this is the most difficult section to estimate with accuracy.

1247. On the other hand it is one comparatively unimportant, representing not quite one-twelfth of the total amount of the silver produced?—Exactly.

1248. We now come to section 4, which deals with the most important of all the sources from which silver is obtained, namely silver ore. I suppose you would admit that there is an extraordinary variety in the fertility and ease of working the various mines in America from which these silver ores are chiefly extracted?—The details of the processes are very varied, but the processes themselves do not differ very much.

1249. I was rather referring to the fertility of the mines than to the processes of treating the ore after it comes from the mines?—The per-centage of precious metals varies very greatly.

1250. And the depth of mine?—Very greatly.

1251. And the nearness to the markets varies very greatly?—Yes.

1252. So that when you talk of the fertility of the mines of America, it is very much like talking of the fertility of the land in England; of course it varies very much from one district to another?—Yes.

1253. And all you can do is to attempt a rough approximation, an estimate?—Certainly.

1254. Now having to deal with such a variety of cases, what has been your method of arriving at an average?—You have taken, have you not, one special mine as a typical example, "The Bonanza King"?—As an example of a deep mine, a mine 520 feet deep.

1255. Then would that represent what I am describing as the mine of least fertility, by which I do not mean the mine producing the least rich ores, but the mine in which the cost of extracting a certain amount of silver in the rough was the greatest?—Well it appeared to me to be the best mine concerning which I could obtain evidence as to cost. I should not like to say that it was an ideal mine for my purpose, but I was unable to get other details.

1256. Do you imagine that mines of greater difficulty of working still pay?—No doubt; but this is a fairly typical case. But I think it is fair to say that mines of greater difficulty would pay.

1257. And on one side, therefore, of this mine there is a large number of mines more difficult to work, and on the other side there is a large number of mines less difficult to work?—Certainly; many less difficult and some more difficult.

1258. So that this does not represent the average mine; it is more towards the difficult end of the scale?—It approaches the difficult end of the scale probably on account of its depth and the difficulty of haulage.

1259. But you have compared the results obtained by comparison of the working of this mine with that of a large number of other mines mentioned by the Director of the United States Mint?—I have.

1260. And the conclusion you have come to is based on a comparison of all these different examples?—Yes.

1261. You say that it would appear reasonable to accept the results deduced from the working of this mine as representing approximately the average richness of the ore treated and the cost of mining and milling?—Yes; the cost of mining and milling, but not the average richness.

1262. That is not perfectly consistent is it with the statement you have just made, that this mine was nearer the more difficult end of the scale?—I did not mean to imply that I thought it was not fairly typical, but, on the whole, I should be inclined to say that it leant towards the difficult rather than the easy side.

1263. But on the whole you are of opinion that it does not so far differ from the average as to be misleading if taken as a specimen mine?—It would, I think, in no way vitiate the result.

1264. If then it is to be so taken as a typical mine we may conclude that the cost of extracting silver from an American silver mine amounts to about 1*s.* an ounce?—Yes.

1265. (*Sir T. Farrer.*) That is the cost on the spot, I suppose, not after bringing it to the market?—It does not include transport in this case.

1266. (*The Chairman.*) But the transport of the precious metals is not a very heavy item I imagine, is it?—No; not when the metal is actually exported in the state of ingots.

1267. (*Sir T. Farrer.*) And is this ore extracted on the spot?—Yes, not far off, about two miles from the mine.

1268. (*The Chairman.*) I suppose the amount of silver extracted from silver mines in Mexico and South America is not now of very great relative importance?—I have given in table I the amount of silver extracted in Mexico, and I have taken the year 1883 not because these were really the latest figures, but because it referred more nearly to a period for which I could obtain data as to cost.

1269. But in that table you have simply given the gross produce of Mexico and South America without distinguishing whether the silver comes from silver mines or from lead mines?—In the case of Mexico it would be mainly from silver mines.

1270. So that the amount is really very important?—Exactly, and the treatment would be mainly a mercurial one, as distinguished from lead treatment.

1271. Is the method of getting silver out of silver ore always a mercurial treatment?—No. So called "wet" methods are increasing in importance to a very large extent in America; but the wet method hardly applies to Mexico.

1272. Is that because the Mexicans have not had the enterprise to adopt the latest improvement in mining?—Water and fuel are very scarce, and the Mexican ores lend themselves better to mercurial treatment than certain ores in America which may be more suitably treated by wet methods.

1273. Is the wet method much cheaper than the mercurial method?—No; on the whole I am inclined to think it is not, but very few details have been published.

1274. I suppose it depends on the amount of water on the spot and on the nature of the ore?—On the nature of the ore essentially. You would have to go through certain preliminary operations in order to convert ore suitable for treatment by mercury into ore that could be treated advantageously by a wet method.

1275. The general conclusion you have arrived at therefore is that the mean cost by all these methods amounts to about 1*s.* 8*d.*?—I do, but I should like to add that I think it is the mean of successful mining and metallurgy.

1276. You have arrived at the mean simply by taking the mean of the cost of the four operations?—Yes.

1277. That is to say the mean of 2½*d.*, 2*s.*, 1*s.* 11*d.*, and 1*s.* 5*d.*?—Multiplying by the amounts which I have assumed to be produced by the respective processes.

1278. In getting your average you have taken notice not merely of the cost entailed by each process, but also of the relative amount of silver which each process produces?—I have. Always assuming that it is justifiable to refer to the total amount produced, the actual cost adopted for each particular operation.

1279. Would you explain that qualification?—In the sense that the 2*s.*, for instance, might not apply to the whole of the 30,000,000 ounces included in the second section, but I have assumed that it is fair to calculate that as the mean cost and multiply the total amount by it.

1280. In fact, the 1*s.* 8*d.* is an average of certain averages?—Certainly.

1281. Now I think it is very important that you should explain to the Commission exactly what you mean by the cost of production. There is a statement that I find on the first page of your memorandum to the effect that the business of silver mining is one

of uncertainty and risk, and taking one year with another the expenses no doubt equal, if they do not exceed, the production. You will observe that there is a certain apparent discrepancy between that statement made on the authority, I think, of Dr. Linderman, and the conclusion at which you arrived, according to which the mean cost of producing silver is very decidedly less than one half of the value of silver even at the present depressed price of silver?—I believe that that mean cost of production, as given in the concluding paragraph of the paper, relates to successful mining and metallurgy, because in the case of unsuccessful works the details as to cost are not published, and it is very difficult to get at an estimate in the absence of such published data.

1282. If in any other manufacturing business you found that the cost at which the product could be sold was very decidedly more than twice what that product cost the manufacturer, you would immediately anticipate that a vast amount of capital would flow to that employment, that the production would enormously increase, and that that process of increased production would go on until the price fell to such a point that only the ordinary market profit was obtained?—I should.

1283. Now what I want to get at is the reason which, in your opinion, prevents that going on at this moment in the silver industry? Is it because, making a survey of the whole industry, it really is not a safe and profitable industry, which would appear to be Dr. Linderman's opinion, or is it that the people who have these mines practically find themselves in possession of what economists would call a natural monopoly? I do not know that I made that clear, it is rather an abstract point, but it is the root of the whole question really?—I quite understand. I do not know whether my reply will fully answer it. My impression is that as improved processes are introduced, and as more accurate knowledge is brought to bear on mining operations, you would approach an ideal price, and that at present a great deal of money is wasted in ignorant search, badly directed search, and in the adoption of ill-advised processes.

1284. There are observers who maintain that all the precious metals are produced at a loss?—Especially Del Mar.

1285. Do you concur with that opinion?—The considerations set forth in the early part of my memorandum make me reluctant to express an opinion on that point.

1286. Of course I do not wish to go into the speculative question raised by Mr. Bagehot, though I would ask you whether it is not your opinion that the fact that so much silver is a bye product and is not the main object of the industry which produces it, does not to a certain extent vitiate the broad and known doctrine which Mr. Bagehot very accurately lays down?—My opinion is that on the whole the production of silver is profitable. My attention has been directed to a question asked of Mr. Giffen, No. 620, and I may mention that I entirely agree with him.

1287. Would you read out the question?—You asked him, "Then, there are two very important points "connected with this branch of our inquiry which I "believe you are not prepared to give us any infor- "mation upon. One is the total of the precious "metals in circulation in the world available for the "world's use, and the other is as to the cost of pro- "duction of the precious metals." His answer was: "As to the cost of production I can tell you nothing, "and of course the one difficulty I should have in "the matter would be that if I were making the "inquiries I should like to know not merely the cost "of production in a sort of average way, but the "facts as to the point to which you called the atten- "tion of witnesses yesterday, viz., the cost of production "at which certain mines would stop, and matters of "that kind. And then with reference to the cost of "production also it must be considered that that is a "thing which of itself may be continually changing "just as all other things are changing. If you have "a rise in wages in one locality, that raises the cost of "production, and if you have a fall in wages, the cost "may fall; and you have always to consider that the "whole thing is changing,—you may have a mine "which is always losing one day, and if you put a "better manager over it, it may be making a profit." I entirely concur in that answer, and I am fully conscious of the difficulty, but I think I have arrived at a probable approximation to the cost of production in the case of the successful mining and metallurgy of silver.

1288. Then if Dr. Linderman's observations be just, it is not because mining operations in actual work are otherwise than profitable, but because such a vast amount of money is wasted in the preliminary stages before you can say that the mine is a going concern?—Yes, and in the ill-advised search for the precious metals.

1289. In this estimated average cost of 1*s.* 8*d.* you make no allowance I understand for interest on capital?—No.

1290. Or the cost of buying the land?—No. I have been quite unable to arrive at any conclusion on that point.

1291. You can give no estimate as to the preliminary charges?—I could not attempt to make any estimate, because money may be given for a mine, and that may be wasted, and then another company may come to work the mine, and you cannot say what has become of the original cost at all. It is difficult to say how far the initial cost should be brought to account at all.

1292. And I suppose the amount of capital employed in the mine must vary according to the depth to which you would have to go before you reached the rich ore, and according to other local circumstances, about which no general rule can be laid down?—Precisely; and again according to the particular favour with which the mine is viewed in commercial circles.

1293. Then apart from the cost of sinking the shaft and other expenditure of that kind, is the actual capital required for carrying on a mine very large in proportion to the output?—No, not when the actual works intended to open up the mine are complete and working satisfactorily.

1294. To put the same question in another form, can you give us any estimate of the relation that what economists call the fixed capital bears to the circulating capital in working a mine?—Not at the moment. That is a question rather for the miner than the metallurgist, and I have examined this mainly from the metallurgist's point of view.

1295. But you will observe it has a very important bearing upon your conclusions, because when you say that it costs so much to produce silver, I suppose you include a fair interest on the circulating capital, that is to say, on the wages and so on?—I have included the mining charges.

1296. But by the mining charges you do not mean charges of fixed capital, but current expenditure?—Yes.

1297. (*Sir T. Farrer.*) When you say fixed capital, do you mean steam engines and boring?—All fixed plant. Boring for mere exploration is not included.

1298. (*The Chairman.*) That would be included in my calculation; not mere exploration, not mere prospecting, is that not the technical term?—Prospecting generally refers to a new district.

1299. (*Mr. Houldsworth.*) Did I understand you to say that you take interest as one of those charges?—No, not interest on fixed capital. Such interest as would apply to capital employed in plant connected with the mine or works should be included, and a fair allowance is made for it.

1300. (*Mr. Birch.*) That is in arriving at the prices you have stated?—Precisely.

1301. (*The Chairman.*) But how is it under those circumstances that there is not an enormous augmentation in the production of silver if you can sell it at 4*s.* the ounce, and if you can produce it out of the silver mines at 1*s.* 5*d.* under class 4? You would naturally expect that a trade so obviously profitable

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would be one to which an enormous amount of capital would flow, and that that would lead to an enormous augmentation of production?—Well, I am afraid I can add nothing on this point to my answer that my figures only relate to successful operations, not to failures.

1302. You think it is not also due to the fact that practically the happy possessors of rich silver mines are really monopolists?—That is an economic question. I can hardly answer that question without giving it more attention.

1303. (*Mr. Fremantle.*) But is it not the case that an enormous amount of capital is employed, and that the return for that capital is comparatively small?—Yes.

1304. (*Mr. Barbour.*) Is it not the case that the amount of silver ore from successful mines is limited?—Yes.

1305. (*Mr. Cohen.*) You cannot expand the silver mining industry unlimitedly; it is limited by the number of mines discovered?—Yes.

1306. (*The Chairman.*) In that case the happy owners of the mines are practically in the possession of a monopoly?—In one sense they are.

1307. (*Mr. Cohen.*) In the sense that the supply is limited?—Yes. You cannot expand it indefinitely.

1308. (*The Chairman.*) Let me put the case in this way. If coal were suddenly to double in value you would practically have an enormous influx of capital into the mining industry. There is no limit to the number of mines you could open and the amount of coal you could raise for a certain period?—The limits would be very wide.

1309. But silver mining, I understand, is not in that condition?—Certainly not; it differs very widely from the deposits of coal or even of ironstone, which are bedded as distinguished from vein deposits.

1310. Those who have the luck to find mines make a very big profit, but practically their profit is not interfered with by excessive production simply because they have a practical monopoly of the silver mines?—Yes, in that sense a limited stock.

1311. (*Sir T. Farrer.*) And some persons have made very great fortunes by silver mines?—Yes; undoubtedly.

1312. (*The Chairman.*) So that if we could imagine that silver doubled in value, the amount of silver raised would not necessarily augment in anything like that proportion?—No, not necessarily.

1313. The profits of those who own silver mines would increase enormously?—Yes.

1314. But practically the amount of silver thrown upon the markets of the world would not probably be very greatly increased?—Possibly not, but the question is very complicated.

1315. (*Sir T. Farrer.*) Is it the case that there are a number of silver mines not being worked at present which, if the price of silver were doubled, would come into operation?—Yes; I have no data as to the number of mines, but no doubt there are very many in the Western States.

1316. (*The Chairman.*) But still you are of opinion that though new mines would undoubtedly be worked which are now neglected, the quantity produced from them would not be very important?—They would be essentially poorer mines that, owing to unfavourable circumstances, are now not working. A mine in California occurs to me from which ore containing 50 ounces to the ton is simply stored, while richer ore, up to 100 ounces, is worked. In such a case the additional quantity produced would probably be very important.

1317. (*Mr. Cohen.*) Of course that does not include new discoveries?—By no means.

1318. (*The Chairman.*) I do not know whether as a metallurgist you have directed your attention to the probability of large new discoveries being made?—No. That again is rather a question for the miner than the metallurgist. I think it is possible that there may be great discoveries in the Western States; there is much speculation in the San Francisco market at this very period, based on rumours the truth of which I have no means of ascertaining, that the Comstock is open again.

1319. (*Sir T. Farrer.*) Is there any knowledge existing as to the comparative probability of the increase in the production of gold, and the increase in the production of silver?—Not that I am aware of. I am of opinion that there will be a large supply of gold from Africa, but I do not know whether that bears on your question.

1320. (*The Chairman.*) Is that a question on which you have made independent investigations?—No, not for the purpose of this inquiry.

1321. (*Mr. Barbour.*) These successful silver mines, as a rule, after a time get worked out?—Yes.

1322. So that the whole capital spent on them would have to be spread over the production?—Precisely.

1323. (*Mr. Cohen.*) I notice that you estimate the production of silver at 88,000,000 ounces. Have you seen this book of Mr. Sauerbeck?—Yes; I have. I have taken the amount of silver produced in 1883 merely because it refers to a period for which I could obtain data as to cost of production.

1324. You know Mr. Soetbeer's figures?—I know them, of course.

1325. He estimates the production for the same year at 101,000,000 ounces?—The figures I give are taken from the Report of the Director of the American Mint; they represent fine silver, and nearly correspond with Mr. Soetbeer's figures expressing standard silver.

1326. You estimate the cost of production at 1*s.* 6*d.* an ounce, the average throughout the world. Mr. Pixley, when he gave evidence the other day, estimated it at 3*s.* 6*d.* I suppose the difference allows for interest on capital, those charges that the Chairman has alluded to?—My impression is that Mr. Pixley refers only to some limited areas in Mexico.

1327. (*The Chairman.*) Do you think you could frame a document on parallel lines with this dealing with gold?—I will do anything the Commission wish me to do. In fact I had begun such an inquiry already. It will be more difficult because the mining of gold is complicated, and the metallurgy comparatively simple, but I will do whatever I can.

1328. (*Mr. Cohen.*) You have brought out facts which are very important as regards the cost of the production of siver, and as regards the field of the production of silver, both of which have an important bearing on our inquiry, and the same principles would apply to gold?—Yes. They would to some extent.

1329. (*The Chairman.*) Undoubtedly it is most important for our investigation that we should have the facts as regards gold?—I might just say, as indicating the kind of difficulty to be encountered, that, in the case of gold washed out of gravel, one part in a million will pay to extract. If on the other hand hard quartz has to be crushed a rich deposit may be unprofitable. The cost depends so much on the difficulties attending the mining and the mechanical preparation of the ore.

1330. But is not the process of washing one which is only possible in the very early discoveries of gold?—By no means.

1331. After you have done the surface washing you have to resort to quartz?—Not if you take the case of "hydraulicing," as the Americans call it in California, where you have huge masses of earth and rock washed down by hydraulic power. In such cases a very small per-centage of gold will pay to extract.

1332. (*Mr. Fremantle.*) If you would look at page 3 of your memorandum, you will see that in the second paragraph you mention the cost of the Horn Silver Mining Company in Utah. I think it would be desirable to tell us what the annual outturn of that Company was?—Speaking more or less from memory, that is a very important mining company, and their outturn amounted to 1,400,000 ounces; at any rate, these are very large and important works.

1333. And at the Eureka Consolidated Mining Company which is alluded to shortly afterwards, was that a large amount?—That was not so important as the

other, but it dealt with some 500,000 ounces of silver containing gold.

1334. Have you seen any statistics or papers prepared by Mr. Norman on the subject of the cost of production?—Yes; I have seen a great number of papers. Mr. Norman has devoted an immense amount of time to the investigation, but for the purposes of this inquiry I cannot quite accept his figures, because he has not in my opinion taken the averages quite correctly. Comparing the yields of gold and silver ores he gets at a ratio of 134 parts of silver to one of gold from calculations of his own, and a proportion of 63 parts of silver to one of gold as the result of information obtained from Mr. Buchanan, President of the Colorado Silver Alliance.

1335. What would be the deduction that you would draw from the whole consideration of the subject of the production of silver?—It seems to me safe to conclude that as silver falls in price, and as the less successful, less well managed mines are closed, you would tend to approach more nearly to these somewhat ideal prices.

The witness withdrew.

Mr. J. W. Birch examined.

1336. (*The Chairman.*) A good many questions have come up in the course of examination of other witnesses on which, as an ex-Governor of the Bank of England, you can give us information; and the first question I should like to ask you relates to the economy of the precious metals through an extension of banking facilities. Could you tell us anything either in addition to or as qualifying some evidence given by Mr. Giffen on that subject, with regard to the extension of banking facilities?—A return which I produce shows a great extension of banks within the last 20 years. This extension has chiefly been in the direction of branches and sub-branches in districts not formerly occupied. In 1865 the total number of branch offices in England, Scotland, Ireland, and the Channel Islands was 2,417; in 1885 it was 3,886, showing an increase of 1,469; and banking facilities have thus been brought to persons of moderate means, small shopkeepers, farmers, and others whose transactions were formerly carried out in cash. Thus, small cheques take the place of coin in numerous instances. I notice that where my own bailiff formerly paid in money for sheep or produce he now brings a good many small cheques. The system of country clearing amongst bankers facilitates the use of cheques for the transmission of small amounts. Where the recipients keep banking accounts these return quickly, but where they do not, the cheque is often paid away again, and may be used instead of coin in more than one transaction. Probably the use of postal orders, in itself a species of banking, to some extent also economises the use of coin. These notes have now attained an issue of about 100,000 a day. Some time ago the Bank of England obtained a very large economy of notes by the establishment of a cotton clearing in Liverpool. The economy in notes was something like 150,000*l.* a week.

1337. I suppose that some of these branch banks supply banking facilities in towns where banking facilities already existed adequate to the needs of the inhabitants; in other words, that it is a competition which may affect the profits of banks, but which does not affect any saving in currency?—It saves to this extent, that formerly in country shops they kept a certain amount in their tills, but now they pay it at once into the bank if there is one. In some places they have a bank open once, twice, or three times a week, and in others they have established a regular branch. The money in the neighbourhood is thus drawn in, and then it is transmitted to the head establishment in London, and goes immediately into employment.

1338. But let us suppose that in some country town there is already established a branch of the London and Westminster Bank, and that the London and County Bank subsequently put a branch of their own there; that may affect the profits of the two banks respectively, but it does not add materially to the banking facilities of the community in that town?—No; therefore I am referring more especially to small places where there were formerly no banks at all. Now you have these sub-branches opening everywhere, all over the country.

1339. But this increase of 1,469 banks is not solely in places where there were no banking facilities before?—Certainly not.

1340. Some of them are in places where banks were previously established?—Yes; and in such places the effect would to a certain extent be, as you said, to draw business from the one to the other, stimulate opposition, and at the same time encourage the development of banking.

1341. Are you of opinion that the limit has now been reached, or nearly reached, of the extension of banking facilities?—I never like to prophesy. I think it is impossible to say. Various means are cropping up for economising money, and a great deal is economised by simple transfer; you cannot tell to what extent.

1342. You heard a witness yesterday explain to us that, in his opinion, telegraphic transfers saved the use of currency less than bills of exchange?—What he stated, I think, was that these telegraphic transfers obliged people to keep larger balances than they kept formerly. That was the commercial way in which he put it, and I called his attention to the fact that people do not keep their money in their tills, and that they keep it generally with brokers or bankers at what we call "at call." When a party has advice of a telegraphic transfer, he immediately calls in the sum requisite, and passes it to his account at his bankers to meet the payment. The money so paid in passes again into use, and at the end of the day the operations are balanced.

1343. But still you would admit that the witness was accurate when he said that a bill of exchange requires no cash to back it, but that a telegraphic transfer does. Whether that cash be "at call" or not, it must be there?—No, I do not think so, because whether a bill has a month to run or three months to run, its day of payment arrives just the same as with the transfer; it is only a payment deferred, for which provision has to be made. It operates in another way, that there are not so many bills offering to discount as there were before.

1344. Do you think that in great commercial cities any further saving of coin is possible?—This depends upon various circumstances.

1345. So that the whole saving that we must look to in England consists in the extension to the provinces of a machinery already used in London, Liverpool, and elsewhere?—There appears to be an extraordinarily small amount of coin current in all our large towns compared with the large sum of our operations. Hardly anybody carries any considerable amount of money in their pockets. If you look round the table we shall probably be found with very little cash in our pockets because we have got our cheque books by which we can draw what we want.

1346. And that process of economising coin can go practically no further than it has already gone?—You cannot tell. I think we see year by year that the economising has gone on increasing on a par with the increase of the population.

1347. I do not know whether you have any information which you could give us with regard to the extension of banking facilities in other countries than England?—No, not sufficiently accurate for public

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evidence; but between this and when we meet again I shall put that in training to see what I can do. It is a very complicated inquiry.

1348. Have you any information that you could give us as to the total stock of gold in this country in the form of currency?—Various estimates, you know, have been made from time to time. Mr. Miller, a former chief cashier of the Bank of England, made inquiries some years ago, and the late Professor Jevons subsequently made an estimate, but I think we ought to try and get further information on this head. It is very difficult to arrive at any accurate information, but possibly an approximate estimate might be arrived at through information at the various banks. At all events an attempt might be made in the same way as Dr. Soetbeer sought information; and as regards England we have more command over the sources of information than he had, and we should not rest content without an attempt. The Bankers' Institute being in correspondence with all the bankers in the kingdom might lend valuable assistance, and I produce a letter I have received from the president, Mr. Tritton, tendering the services of the institution.

1349. You are aware that one of the points brought very prominently before the attention of the Commission is the drain made upon the gold resources of the world by the alteration of the Italian coinage from a silver to a gold standard. In order to carry out that operation gold necessarily poured into Italy between the years 1881 and 1883. Have you any information to give us as to the source from which this gold was derived?—Yes; I produce a statement which was furnished to me by Messrs. Hambro, the contractors for the loan, showing the form in which the gold was supplied, and from whence it came. (*See* Appendix.)

1350. Can you tell us in a few words the sources from which it came?—104,000,000 lire came from England; Italy itself furnished 105,000,000 lire; the greater portion apparently from coin, and only a small proportion of new gold.

1351. Are you of opinion that the amount that came from Italy was drawn from hoards?—I should think so to a great extent.

1352. But you have no evidence of that?—No absolute evidence.

1353. The rest of it was drawn simply from the gold circulation of other countries?—Principally from the gold circulation of other countries. I see that Australia only supplied about 10,000,000 of lire.

1354. Have you any information of a corresponding kind to give us with regard to Germany?—No; but from inquiries I have made amongst men who ought to know something about it, they seem to be of opinion that about two-thirds of that gold was from French hoards; and in illustration of that I heard this of one of the leading French bankers, who at the time of the siege of Paris left Paris to go and look at his estate in the neighbourhood. He went up to one of the peasants and told him that he was just come out to look after affairs, that he was very anxious to pay his people their wages, but he had no money disposal under the circumstances. The peasant said: "If 40,000 "francs are any good to you I have got them in a "stocking under my bed, and I will go and fetch "them," and he went and fetched them, and they were in gold coin. The French by their system of issuing rentes at what appeared to be a low price, and giving the advantage to people who applied for five franc rentes, attracted these hoards, and these people rushed in with their money and got the allotments partly with a view to obtain the premium. I think a great deal came in in that way.

1355. But there was no special advantage given to the owners of hoards by the proceedings of the French Government?—Yes. These hoards are generally held by small people all over the country, and the French Government gave to everybody who subscribed for five franc rentes in preference to those who subscribed for 100.

1356. You will notice that the point is one of vital importance to our inquiry, because one of the points strongly brought before us is that the appreciation of gold is very largely due to the strain made upon the gold resources of the world by the introduction of a gold currency into Germany; but if two-thirds of that currency were drawn from hoards, or in other words practically came from an entirely fresh supply, that argument to a great extent falls to the ground?—Yes.

1357. Could you therefore put us in the way of getting authentic evidence or further evidence on that point?—Well, I will do my best.

1358. Then without having made any very close investigation yourself on the point, you are still convinced, after conversing with competent authorities, that more than one half of the 80,000,000*l.* required for Germany was drawn from hoards, and not from the circulation of the world?—Well, as far as the circulation of the hoards goes, it was cash, and it would appear to be circulation, but it was not in regular circulation because it was locked up, and these people would only use it when they required it.

1359. Then you would draw a distinction between the hoards of the French peasants and the hoards of which we were told yesterday in India, which practically are quite removed from circulation?—That is a very difficult point to arrive at. A man may have a large sum of money locked up in his house in coin, hardly with the intention of hoarding it, but still keeping it out of circulation; whereas in India they lock it up with the intention of hoarding it, and no other intention. The effect is the same for the time.

1360. But still if this money had practically been withdrawn for many years from circulation, and if it would not have come into circulation again but for the alteration of the German currency, for the purposes of our argument, we may consider those hoards as hoards in the full sense of the term?—Yes, I think so.

1361. (*Mr. Houldsworth.*) The point is that, according to your information, one half of the amount required did not come from new productions of mines?—No.

1362. (*Mr. Cohen.*) I suppose you would agree that the amount of circulation in the United Kingdom practically remains almost unaltered throughout the year with the usual inflations at the end of the quarterly periods. The amount of notes in circulation throughout the kingdom is about 25,000,000*l.*?—Yes, but that might vary under many circumstances.

1363. It does not vary materially from year to year?—It does not vary very materially.

1364. What I want to arrive at is this, that any addition to the circulation of the United Kingdom is not likely to take place when you find that the variation in the note issue is perhaps not more than 2,000,000*l.* or 3,000,000*l.* in the course of any one year; that you are not likely to have any circumstances that require or call for any large alteration in the circulation of the precious metals?—I should not think so, but I should not like to answer this without a little consideration.

1365. If you put out more notes you displace metals, and if you call in metals you require notes to take their place?—Yes, as a rule, you would.

1366. (*The Chairman.*) I think as we are discussing hoards it would be convenient if I were to ask you a question with regard to a reply given by Mr. Giffen as to the effect of raising the rate of discount on the supplies of gold in the country. Mr. Giffen stated that he was rather inclined to think that raising the rate of discount above a certain point tends not merely to attract gold from foreign countries where the rate of interest was lower, but also to attract gold from hoards in this country itself?—If I recollect rightly he did not state that as a positive opinion, but as a conjecture which he thought was rather plausible. There are various circumstances connected with this question. In the spring and again in the autumn there is a flow of gold from the Bank to Scotland, Ireland, and the provinces, but we can calculate more or less when it will

return, and, therefore, under ordinary circumstances, we do not attempt to check this outflow by raising the rate of discount; but if simultaneously with this drain, and on a low reserve, we find the foreign exchanges against us, we endeavour to check the foreign demand for which perhaps a rise of ½ per cent. will suffice; and this extra ½ per cent. acts also as a pressure to draw back as early as possible the amounts I refer to as going down to the provinces in the usual way. At other times the rates of interest are high in the countries from which we expect to draw gold, and we have to raise our rate until the object is achieved. With regard to what Mr. Giffen said about attacking the hoards, what I suppose he has not seen quite clearly is this, that at times money is absolutely unlendable by the brokers in London. You cannot get even ½ per cent. per annum for your money. Then the bankers, I imagine, would leave their money in the country, not to have the expense of sending to London. A considerable sum might thus accumulate. Another ½ per cent. or 1 per cent. makes money lendable to the brokers, and then the bankers of the country send it up to employ it. At times you see quoted in the papers the Bank rate as 2 per cent. or 3 per cent., but the real rate may be 1 per cent. at which people are discounting bills, and the brokers will not take money sometimes at any price. It remains in the country, not to have the expense of sending it up to London, and a very small amount in each bank would produce a large amount in the aggregate.

1367. Your view is not that the hoards are touched, but that the reserves of the country banks are affected?—Yes, I do not believe in English private hoards.

1368. (*Mr. Houldsworth.*) Mr. Giffen specially mentioned that when the rate got up to a very high point, 8, 9, or 10 per cent., he noticed that there was a new flow; would that apply to the banks? would not the banks send up their reserves before 8 or 9 per cent. was reached? — Naturally, an exceedingly high rate might induce country bankers to send up all they could lay hands on. The flow, when it gets to anything like that is not so much from the country as from abroad, because, at exceptionally high rates, the Bank of England affects, or has done hitherto, the gold markets abroad, and bankers abroad prefer to hold first class bills on London; it is the best security that they can hold, because they know that those bills at maturity will be paid in gold.

1368*a*. (*The Chairman.*) To return from the question of hoards to the question of the movement of gold, could you give us any particulars as to the amount remitted to the Argentine Republic, Buenos Ayres, Brazil, and Portugal, either on account of loans or for any other purpose?—In the printed tables you gave us the other day I was struck with the movements of gold. This paper that you have given us groups together South and Central America, including Mexico, and the West Indies. Well, several of these countries are producers of gold, to a more or less limited extent, while others are users of it, and I thought it better to try and make a more detailed statement to see what countries took gold from us. I have only had time to get these reports for this last year, beginning at the 31st of December 1885 till the 1st of December in the present year, but I have asked the Chief Cashier of the Bank to make them out for a longer period. Probably you will be rather surprised to see that the amount sent to Buenos Ayres in these 11 months amounted to 3,352,000*l.* in English gold coin, to Brazil 243,000*l.*, and Portugal 1,464,000*l.* It is rather an important feature, you see, and you cannot get it from your memorandum.

1369. Has that gold remained in the country to which it was sent?—It remains for some time. Apparently it goes into the banks there, and they do not like to let it out. It does dribble back by degrees, but in very small amounts in comparison with the amounts that go out.

1370. But would you consider this drain as one of the permanent requirements of the world for gold currency, or is it not rather to be classed with the ebb and flow of the precious metals constantly going on between the civilised countries?—No, it is not the ebb and flow in the ordinary sense, because these exports are principally on account of loans made in this country and the interest and capital of these loans will either have to be paid in commodities produced by the countries or in the gold returned to this country, not at all in the ordinary sense of the circulation. Portugal for some years has used our gold coin, and so has Brazil as their currency. We coin it for them gratis, and they make use of our coin. That is why I wish to point out the peculiar position of those countries.

1371. Have you made any investigations into the amount of gold coin used in the arts and manufactures of the United Kingdom?—In 1877, I think it was, the Bank of England started some inquiries with regard to that. We began with Birmingham, and in Birmingham we found that about 10,000*l.* a week was used by the manufacturers, and that they took light gold coin, which we sold to them at weight. They knew exactly the standard, and it suited them best because they could take it in any quantity they liked. But from information I have received during the last few days it would appear that they are now rather taking to buying fine bar gold, and I have asked the staff of the Bank to make inquiries with regard to that and ascertain what facts they can, and I have also requested Mr. Tritton to set the Banking Institute to work in the same direction, with the view to see whether it is possible to come to anything at all accurate with regard to England itself. We must do what we can.

1372. Have you noticed that in recent years, say from the year when Germany began to require gold for her coinage, and the Latin Union ceased to be purely bimetallic, an alteration in the English Bank rate has not produced the accustomed effects?—It has produced the same effects.

1373. There has been no difference?—It may be necessary to raise the rate higher when gold is at a premium in the gold currency countries, as at the present moment happens with France.

1374. But there is nothing in the fact that the country is using gold as a standard which should make gold at a premium in it, is there?—Well there is the double standard you know in France, gold or silver. You can pay to any extent in gold or silver; the same you may in Germany, the same you may in all these European countries.

1375. (*Mr. Barbour.*) And to secure gold you pay a little extra; if you pay a little extra they give you gold?—Yes; you would probably obtain it. The Bank of France could not charge you a premium upon gold coin, but upon bar gold, yes.

1376. (*The Chairman.*) Can you give us the exact par of exchange between England and other countries from which gold is attracted by raising our rate of exchange?—In France the par is considered to be 1*l.*=fcs. 25.22½ (25.2215), Berlin 1*l.*=marks 20.43 (20.4294), New York 1*l.*=$4.865 (4.89).

1377. Can you give us the present rates of exchange?—I think instead of taking the par of exchange I can tell you the specie point, which is by far the best way. There are two ways of describing what is the par of exchange. Taking France for instance, if you put the specie point at which it can come from Paris, and at which it can be sent from here to Paris, it is best.

1378. I believe you have some information from private sources with regard to the present circulation of the precious metals, and also of paper currency in France, Germany, Italy, Belgium, and Switzerland?—I have got that and I will put it in, and the information I have received from Messrs. Rothschild. (*See* Appendix VII.)

1379. I think you told us just now that the Bank of France was holding a very large stock of gold. Could you give us any information as to the amount, and as to the increase, and as to the cause?—I have a statement here which was made up in the middle of September, so I have not altered it. On the 1st of September the Bank of France held 54,000,000*l.* of

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gold, and 23,000,000*l.* of silver, and in 1880 she held 32,000,000*l.* gold, and 51,000,000*l.* silver. (*See* Appendix VII. A.)

1380. The main point is that whereas it was 59,000,000*l.* in 1876 it sank to 32,000,000*l.* four years afterwards, and has risen again to 54,000,000*l.* Is there any conclusion which you draw from those figures?—That evidently she is drawing in gold and giving out silver instead; that she is apparently to a great extent what we should call hoarding her gold.

1381. But the amount of gold she holds now is not greater than it was 10 years ago?—Exactly, but then look at it with regard to the silver.

1382. Is there any conclusion that you draw from that bearing upon our inquiry?—Simply that she has had no difficulty in increasing her stock of gold when she wished it.

1383. But I suppose you would not say that any country has any difficulty in increasing the stock of gold if it chooses to raise its rate of discount?—Oh, yes, certainly, in my opinion.

1384. Would this country have any difficulty?—This country; but then this country is *per se*. Other countries would have a certain power, but not so much as England.

1385. Would not Germany attract money if she raised her rate?—She would attract money. A country can attract money as long as there is great confidence in it, and it pays in gold, but supposing there is war you might go to any rate and not be able to draw it.

1386. As long as there is peace a civilised country would be always able to attract money by raising the rate?—In Spain for instance I do not think it would produce that effect, nearly to the extent I have indicated just now.

1387. Spain is not sufficiently commercially advanced; there is no great confidence in her; no great market?—There is no great market for large stock exchange operations, which is worked upon here as well as in France and Germany. Now Berlin has become a very large centre of operations, and so can do it.

1388. Is there any information that you could give us about the Spanish currency relative to our inquiry?—The Deputy Governor of the Bank of Spain has sent me a very interesting account. It goes to prove that gold is being replaced by silver, and out of the very large amount of gold coin in Spain during the last 10 or 15 years a very large portion of it has found its way into France, and been replaced by silver, although the balance of trade would probably be in favour of Spain.

1389. What is the legal tender in Spain, gold or silver?—It is strictly bimetallic, and it has not joined the Latin Union, and the Government buys silver by tender and coins it, and makes a profit.

1390. (*Mr. Barbour.*) It is a gold standard country, practically?—No, you can pay in the one or the other. Both gold and silver are legal tender in Spain, and at a fixed rate.

1391. The Government will receive either gold or silver in taxes?—In payment of taxes, yes, either the one or the other.

1392. Is there any gold in circulation?—There used to be a good deal, and there is some now. I was talking the other day to the manager of the Rio Tinto Mines, and he told me that they had no difficulty in paying their workmen who can earn as much as a gold coin, in gold.

1393. (*The Chairman.*) Is there not a free coinage?—No, no free coinage; the Government coins both.

1394. The Government coins both, but would they coin both in unlimited quantities if you brought it?—No, they would not; they buy their gold and they buy their silver. It is simply bimetallic.

1395. (*Mr. Cohen.*) I would ask you a question on a point that has not been touched, and that is the question of light gold. Do you think that the light gold held by the banks constitutes in any way an addition to the items causing scarcity in this country?—Well, if there was a scarcity it would. If it was locked up because people did not want it, it would not go into the circulation.

1396. You have heard the amount put at 10,000,000*l.* sterling; would it be so much as that?—Well, it might be a great deal more.

1397. It is only the English banks that would lock it up because the Irish and Scotch banks issue notes?—I do not think a very large amount is locked up.

1398. Do you think that if 1*l.* notes were issued it would economise the use of gold, or simply displace an amount of gold, and have it sent abroad?—That would depend upon what security you gave for your 1*l.* notes. If 1*l.* notes were issued against gold it would economise the wear and tear of the gold, and if against securities, they would displace gold to the extent they were put into circulation.

1399. You do not think that it would displace the gold to send it abroad?—It would, of course, displace it. I mean if you allowed the notes to be issued without a backing of gold the gold would go abroad and you would have the notes.

1400. (*Sir T. Farrer.*) Do you know what the ratio between gold and silver is in the Spanish currency?—1 to 15½.

1401. And you say gold is leaving Spain?—Yes, it has been leaving.

1402. The currency both of Austria and Russia is paper, is it not?—Yes, I believe so.

1403. Their currency is practically paper with a silver standard?—With a silver standard. I see also in the memorandum from Italy that gold was drawn from Russia to Italy, and of course would have been replaced by paper. In the Bank of France they hold 99·8 of bullion and the notes in circulation is 107.

1404. (*The Chairman.*) But is not that a larger proportionate reserve than is usual against note issue?—It is extraordinary.

1405. Of course their liabilities are not purely note liabilities. That gold reserve is also a reserve against ordinary banking liabilities, is it not? The Bank of France do not divide the issue department from the banking department as the Bank of England do?—No, they do not.

1406. Therefore their whole liabilities must be taken into account before we say their gold reserve is a large one, is that not so?—They are not bound except by the law of 1884, which provides that they must not issue more than some enormous amount which they have never done. There is a limit.

Adjourned till Tuesday, 1st February 1887.

Seventh Day.

Tuesday, 1st February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
SIR JOHN LUBBOCK, Bart., M.P.

MR. GEO. H. MURRAY, *Secretary*.

MR. SAMUEL MONTAGU, M.P., called and examined.

Mr. S. Montagu, M.P.

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1407. (*The Chairman.*) The question which the Commission is anxious to investigate, with your assistance, is how far the demand for gold is likely to diminish in the future through the increase of banking machinery either in England or on the Continent, and for that purpose we thought you could give us information drawn from a large number of countries?—The result of the information that I have here would show, what every City man knows, that the banking facilities for London are certainly superior to anything that you can find in any other part of the world. When you come to the facilities for the transfer of funds from one part of the kingdom to the other, there we are behind other countries. For instance, the Bank of England has only nine branches outside of London, and in Germany the Imperial Bank has 184 branches; and even Holland and Belgium have far superior facilities for the transmission of money to and from private individuals to those which we have.

1408. Do I understand you to say that England is less fully banked than Holland or Germany?—Of course there are more private bankers in England, and there are certain facilities afforded; but for the general public the facilities are far greater for the transmission of money in Germany. For instance, you can pay in money to any extent at any one of the 184 branches of the Imperial Bank in Germany, and it is paid out next day without any charge, whereas the Bank of England makes a charge of 6*d.* or 1*s.* per 100*l.*, except in certain cases under special arrangements.

1409. But what your evidence so far indicates is, that the Bank of England is not on a level with the Imperial Bank of Germany and the Bank of Holland in the matter of branches; but that is quite a different question, is it not, from that which we have to determine in trying to come to some conclusion as to whether England is more or less "banked"?—Yes. But I may mention with regard to the Bank of England that we have to withdraw gold to send periodically to Scotland and to Ireland, which does not occur in other countries. Bank of England notes being limited to England and Wales they are not legal tender in Scotland or Ireland. This limitation necessitates the transmission of gold, and therefore there is no economy in the circulation of gold like there is abroad.

1410. You mean that from a banking point of view Ireland and Scotland are foreign countries to England?—Almost; it is not precisely that the bank note does not circulate, but it is not a legal tender.

1411. But at all events specie has to be transmitted from London in payment of debts to Scotland and Ireland, whereas in Germany they would transmit instead bank credits?—They would pay into the *giro conto*—as it is called; and the system prevails also in Italy, Belgium, and Holland; that is that the bank will transmit money, without charge, to all the important towns in the kingdom. That constitutes a great economy in the use of bank notes and gold.

1412. Then do you deduce from that that Germany and Holland do with a smaller quantity of gold currency than the United Kingdom?—Yes, in proportion to their numbers.

1413. In proportion to the number of transactions?—Both to the number of inhabitants and to the number of transactions. There is also a great facility which I should like to point out in regard to the collection of small bills for tradesmen and others through the Post Office, which prevails in France especially, and in Germany also.

1414. Then do I understand your opinion to be that in England the banking machinery, which is to a certain extent a substitute for the use of currency, is less perfect than on the Continent?—In regard to the small transactions and to the small tradespeople.

1415. That is not the common view, is it?—I think it must be, because there is no facility, say for a small tradesman who has no banking account, to deal with other parts of the country which there would be if we introduced here the system prevailing in Germany and France of collecting accounts through the Post Office.

1416. But if the machinery by which debts are paid in distant parts of the country is more perfect on the Continent than it is here, is it not true, on the other hand, that in England almost every man has a banking account, which results in an immense economy of the precious metals to which there is no parallel on the Continent?—Yes, I think that the facilities for banking in London, as I said before, are vastly superior.

1417. But would you not extend the same proposition to the country?—There is no system of clearing in the provinces generally. There is a little in Liverpool, I think, but there is no clearing generally, and I think that for the conduct of very small transactions we are behind the Continent.

1418. Would not every tradesman in Newcastle or Birmingham have a banking account?—Not the very small tradespeople.

1419. But at all events more than in towns of a similar size on the Continent?—Yes.

1420. I quite understand that your evidence goes to show that for the payment of debts between one centre of industry and another in England, we are behind the Continent?—Especially for small debts; not so much for important amounts.

1421. I perfectly understand that; what I wish to know is whether that is not more than compensated by the economy of the precious metals, owing to the national habit of keeping banking accounts which does not prevail to the same extent in any foreign country?—I think so. I am only pointing out a defect in the system, not that the system is inferior, taking it as a whole. In fact, I believe it is vastly superior.

1422. Then which of the two systems has the greatest effect in economising the precious metals?—With the exception of the periodical transfer of gold to Scotland, and occasionally also to Ireland, I think that this country economises gold fairly well. If the

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currency were in a proper condition. What I was particularly anxious to call your attention to was the facilities for small transactions, which are extraordinary in Germany, such as collections through the post and postal telegrams. You can telegraph a payment of 400 marks in Germany through the Post Office at a very small cost, and you can also insure registered letters.

1423. We have nothing like that here?—I have made inquiries in Austria, Germany, Belgium, France, Italy, and Holland. Those are the six countries in which I have found greater facilities, and especially Belgium, where you can insure a letter up to 400*l.* at a ridiculously low rate; it is equal to 2*s.* per 1,000*l.*

1424. Is that done by Government intervention?—Yes; through the Post Office, which is under the control of the Government.

1425. It is not done through the machinery of the National Bank?—It is under the same control, I believe, as the National Bank. The governor of the National Bank in Belgium is also in the Post Office administration. In Germany the charge for sending 20*l.* through the post is 40 pfennig, or 5*d.*, which is the cost of a postal order, and then they charge a commission of 6*d.* up to 20*l.*; but if the telegraph and post office are not in the same building, there is an extra charge of 3*d.* It costs about 1*s.* to send 20*l.* by telegram through the Post Office.

1426. In every town of any size in England, and still more in Scotland, you will find either a bank or a branch of a bank?—Yes.

1427. Is there anything like that condition of things to be found in any foreign country except America?—Yes, in France the different financial establishments, the *Crédit Lyonnais* and the *Société Générale*, have branches in almost every town, and they give great facilities for the transmission of money and cheques. Also in Italy there is a great number of private banks, and, as I said before, there are much greater facilities there for the general public, because it is not necessary to keep a banking account to transfer money, but the person who receives it must have an account with the Imperial Bank of Germany.

1428. But these French institutions of which you speak, do they correspond exactly to our banks?—Almost. They correspond very nearly to our joint stock banks, not to the private banks.

1429. Is it the habit of every trader in France to keep a banking account?—No, certainly not.

1430. They keep the money necessary for carrying on their transactions in their houses?—They do so considerably more than in this country.

1431. And that necessarily leads to a considerable waste, or at all events to a considerable increase of the amount of the precious metals which are required to carry on the work of the country?—Yes.

1432. You have no means of saying whether the loss which foreign countries undergo by the absence of the habit of keeping banking accounts, compensates for the superiority of the machinery which you have just been describing, for payment of small debts at a distance?—I should think there is as much economy of gold, taking it as a whole. I think they are developing their system of banking so as to economise currency, and with their other advantages they might pass us; but I should think, taking it as a whole, the economy of gold, if gold were of proper weight, would be greater in this country.

1433. A large number of authorities are of opinion that England cannot be better "banked" than it is?—I quite agree that the general system of banking is superior in this country.

1434. And that no great economy of the precious metals in the future can be looked for by any improvement in our internal machinery?—Yes, by permitting the Scotch banks to have their excess of notes, covered by Bank of England notes, instead of by gold. A large amount of gold goes periodically from London to Scotland, and comes back again, most needlessly, and those withdrawals have an effect upon the money market. These gold movements periodically to and from Scotland and occasionally to and from Ireland are quite unnecessary considering that ours is a United Kingdom.

1435. England now requires about, say, 90,000,000*l.* of gold sovereigns to carry on the transactions of the country. Do you think that that amount is likely to be diminished by any alteration which we may anticipate taking place in the banking machinery of the country?—Yes, certainly, it could be diminished. I think it is greater in proportion to the number of inhabitants than in any other country.

1436. In proportion to the transactions, or only in proportion to the inhabitants?—It is not necessary if you had the suggested improvement with regard to gold movements in Scotland and Ireland, and if you had 1*l.* notes for England you would not require anything like the circulation of gold that we have now.

1437. Have you made any estimate of the amount per head required by England, as compared with that required in France, Germany, and Italy?—No. I only know that we commonly understand that there is a considerable amount of gold in France, but not very much more than in England, and there the country is larger. The amount in circulation in France I do not think is materially greater than in England. That is the general opinion, but it is very difficult to ascertain.

1438. Should you think that the reason of that is that the French have contrived to improve their method of payment of debt between towns?—No. I think they have not yet acquired the habit of using it; they never had the gold in circulation to the extent that we have. We have had the luxury of a gold circulation for so long that it has been rather abused.

1439. The amount of currency, not of gold alone, per head in France, is not greater than it is in this country?—No.

1440. It is only in the small transactions that there is anything to imitate in any other country?—There is nothing except for small commerce.

1441. Do you see any signs on the Continent of an approach to our system, by which similar economies may be obtained in the currency?—Yes, in France and in Italy; also in Germany and Belgium they are copying us as rapidly as they can, and the cheque system is becoming more and more developed; in later years and even in later months there is a marked difference.

1442. Then do you expect an economy in the use of the metallic stock of the world which would really be of importance from a monetary point of view?—I do not know that it would be very important. It will facilitate transactions which are now somewhat hindered, and I suppose it would reduce to some extent the metallic circulation; but to a greater extent it would economise the use of bank notes.

1443. Let me put the same question in another way. One contention with which you are familiar is that gold has appreciated and prices fallen through the great strain that has been placed upon the gold circulation of the world, through various causes which I need not enumerate; do you think that the facilities which are being gradually adopted in France, Italy, and Germany will have any material counteracting effect?—Not with gold.

1444. But gold is now the circulation of Germany, Italy, and, more or less, of France?—Yes; but it has not got into very much use as yet, they have so many small notes which they have always been accustomed to use. In Italy you see no gold; in France you see more gold; but in Germany you see little gold in circulation, and if Germany were to prosper materially, I should think they would require more gold in circulation. What I mean by cheque facilities is for the transaction of business, and saving the transmission of notes to and fro rather than of gold. I do not think the Germans have in proportion anything like the quantity of gold in circulation that we have, and therefore, if they could afford it, it would rather have a tendency to increase, the same as in the United States.

I do not think you will economise gold. You may perhaps prevent further appreciation through economy. Otherwise I think it would go on appreciating. It is very recently that Germany has acquired a gold circulation, and you see very little in travelling. They have still small bank notes in circulation.

1445. But you would be prepared to hold that it is an advance to substitute gold for notes?—No, I do not. It is an advance to Germany, because it is only recently that they have been able to have gold instead of silver. It is something like 12 years.

1446. At this moment, of course, notes in Germany can be changed for gold at sight; it is a convertible paper currency?—It is; but gold is not obtainable in large quantities for exportation.

1447. But do you anticipate that the Germans ever will take to using more gold than they do? will they not adhere to notes like the Scotch?—No, I think that they will not. I think that they have been used for a great number of years to notes, and they are gradually getting out of it. They have notes as low as 5*s.*; and they have no occasion if they can have a gold circulation to have notes so small.

1448. But the Americans, I am given to understand, are taking to notes of that value from preference?—One-dollar notes. Since the disappearance of gold in America, when greenbacks alone were current. It takes a good many years to make the change, but I think the tendency is to get rid of very small notes all over the world, because they are not so desirable as coin.

1449. But the genuine Scotchman prefers a dirty pound note to a clean sovereign?—A 1*l.* note I do not consider a very small note.

1450. You think anything under 1*l.* would gradually disappear?—Yes. In fact the Bank of France has withdrawn all its 20 and 25-franc notes. They have in France nothing smaller than 50 francs. That is a case where a great country like France has practically withdrawn its small notes.

1451. Do you know the grounds on which they have adopted that policy?—I think it did not quite pay the banker to have them so small. The expenses of the circulation, and also their desire to get more metal into circulation, were given as reasons. I do not know that they have acted quite rightly in taking away the 25-franc note, because other countries rather preferred them, but certainly the tendency of civilised countries is to get rid of the very small notes.

1452. Then may I summarise your evidence in regard to the Continent in this way: that there is a tendency towards the economy of the precious metals through the increase of banking facilities on the model of England, but that this tendency will be to a certain extent—perhaps completely—counteracted by giving up their small notes and substituting for them metallic currency?—Yes.

1453. (*Sir T. Farrer.*) Silver or gold for the smaller notes?—I should think that they would be more likely to use silver for the very small notes.

1454. (*The Chairman.*) So that this change would not affect the question which I put to you a few minutes ago regarding the strain on the gold currency?—No, I do not think it would. I think the tendency to take more gold into circulation in Germany is only because they have not been in the habit of having it, and the novelty of it may perhaps induce them to take more into circulation, but it is a very difficult point to determine. I do not think I should like to pledge myself to it, but in Germany one account is that they rather like the 20-mark note, but I do not know whether they like the 5-mark notes. The Treasury only issues notes as low as 100 marks, which is 5*l.* Besides these notes there were still in circulation at the end of 1885 about 138,000,000 of Reichskassenscheine of 5, 20, and 50 marks each, which are very useful to the public.

1455. Do you think the public would prefer gold circulation to that?—No, I should think not. I should think the 20 and the 50 mark notes they would keep. They would prefer to use silver rather than the 5-mark notes.

1456. So that, so far as the small notes are concerned, which you think will be given up by these nations, there would be no increased demand for gold?—No, I should think not.

1457. And, therefore, there would be nothing to compensate the economy which would be produced, according to your investigations, by the adoption of English banking methods in those countries?—No, I do not think it will have a material effect upon the gold.

1458. Do you think that any economy in the use of gold or silver is likely to occur from increased international facilities of exchange?—From all countries the reports are that the postal orders are very insignificant, and that the bullion transactions with the Continent as a general rule have diminished, with the exception of Germany and France, in which they continue on a large scale.

1459. I suppose a great deal of the bullion transactions is simply due to the fact that the holders of bullion think that they can make rather more in France than they can in England, the rate of discount being higher in Paris than in London?—For the settlement of the balance of transactions.

1460. It is simply that there is no other cause?—And also the exchange is worked by the arbitration of stocks, and by a larger interest in one place than another. The balance of trade is brought about by the transactions in stocks, and also by the higher price given for money.

1461. Then may I take it that for many years past bullion has only gone from one country to another to settle the balance of trade?—Except in the case of America, Italy, and Germany, which have only recently introduced gold into circulation. There is an important item in Germany which, I suppose, you are aware of, that is the war chest of gold, about 6,000,000*l.* sterling, which is kept as a war reserve.

1462. (*Mr. Birch.*) It is much larger now?—No, that is the present figure. In Germany it is not believed that there are any large amounts of precious metals hoarded, with the exception of the amount the Government and the "Notenbanken" keep, and the "Reichskriegsschatz" (German Empire war treasure) of 120,000,000 marks in the "Juliusthurm" at Spandau.

1463. (*The Chairman.*) That is insignificant compared with the gold the Bank of France has, is it not?—Yes, the Bank of France has generally between 40,000,000*l.* and 50,000,000*l.* sterling.

1464. Have you any ground for thinking that no economy is likely to occur, through the improvement of banking machinery, in the amount of bullion required to settle international transactions?—No, I think not.

1465. Have you any other facts you would like to lay before the Commission?—I do not know whether you wish to touch upon the question of international bi-metallism, I mean an arrangement with foreign countries with regard to fixing a ratio between silver and gold.

1466. That is a question that will occupy the attention of the Commission, but we have hardly reached the point at which we could discuss it?—Very good.

1467. (*Mr. Barbour.*) Is it not the case that in America notes for very small amounts are rather coming into fashion than otherwise? In the eastern part of America, at any rate, there is no tendency to give them up?—I was in America two years ago, and my experience was that most people would dislike very much those one-dollar notes, many of which you could hardly read. I saw a great many dollar pieces and occasionally gold. The fractional notes, as you are aware, were given up a few years ago, and I do not think the one-dollar is coming into favour.

1468. You think the use of the paper dollar is not extending?—No, I think not.

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1469. (*Mr. Birch.*) Did I understand you to say that the receiver of the telegraphic transfer in Germany must have an account at the bank?—No, the receiver in the *Giro* account for the transfer of money not by telegram. The transferee must have a banking account. You pay in at Hamburg, and if the man has an account with the branch of the Imperial Bank at Bremen he will receive the money the next day free of charge.

1470. It is not necessary that the sender should have an account. I pay in 5*l.* at Bremen which I want to be paid at Hamburg. I need not have a bank account, but the man who receives it at Hamburg must have an account?—Yes.

1471. It is a facility, but it is only half a facility?—Yes. I believe in Italy and in Belgium there is no occasion to have an account with the National Bank. They give the cheques out at a very small cost. In Italy, I think, it is 50 centimes, equivalent to 5*d.*, for any amount.

1472. Though the Bank of England has only nine branches, and the Bank of Germany has 184, we have of the joint stock banks something like 2,400 branches, which would render every facility it is almost possible to conceive in the shape of paying in money?—You could send money from London. You cannot bring it to London free of payment, because money available in London is always in demand in the country. It is worth, you may say, a premium, therefore you can send money away from London, but you cannot bring it back except by paying a commission.

1473. There is a convenience in London being the great centre where all these operations are arranged through the clearing-house. I should imagine we are pretty well "banked." Then you have post office orders here for any amount you like, perhaps not quite so cheap as in Germany?—No, I beg pardon, you cannot send by telegram through the post here, as you can there, and you can collect bills through the post in France and Germany. You can protest bills and clear bills through the Post Office at a small charge.

1474. With regard to the note circulation, it appears that people prefer notes. If you look to the Bank of France you will see that of late it has held about the same amount of precious metals that it has had of note circulation. The other day they had 100,000,000*l.*, and they only had 110,000,000*l.* of issue?—Their maximum is 160,000,000*l.*, their deposits are three milliards and a half, that is 140,000,000*l.* The maximum was raised in 1872. It has been raised from 2,800,000,000 fr. to 3,500,000,000 fr. In 1871 it was raised from 2,400,000,000 fr. to 2,800,000,000 fr., and in 1872 to 3,200,000,000 fr., and in 1872 it was again raised to 3,500,000,000 fr.

1475. I heard yesterday that there is very little silver circulating in Italy?—Exchange on France is at a premium of about $1\frac{1}{4}$ per cent. in Italy, therefore it must be that they cannot get even 5-franc pieces. They cannot get gold, and 5-franc pieces must be scarce. The exchange is higher now than it has been since the resumption of specie payments, and has moved up very much in the last few days.

1476. It would appear that there is room for a little silver to go there?—The bank will not part with gold or silver excepting in very small quantities. They ought to part with their silver and gold because the exchange is so much against them. The exchange has risen from 25.30 to about 25.70, which is the present exchange.

1477. Therefore if it was possible to tap the Bank of Italy there would be no difficulty in making a profit on exchange?—The National Bank will not part with its coin. The Italian 5-franc pieces will not be taken currently in France. They will be taken mixed. They will not take them alone; one-third may be Italian, one-third Belgian; that is the maximum proportion.

1478. (*Mr. Cohen.*) You spoke of 1*l.* notes in this country. You are aware, of course, that the circulation which we have in England varies but slightly from 24,000,000*l.* to 26,000,000*l.* Is it not the case that if we issued 1*l.* notes there would be a displacement of gold to the extent of the 1*l.* notes which would be issued?—Yes; the gold would go to the bank.

1479. It would go abroad, would it not?—Not necessarily, unless the balance of trade was in favour of other countries.

1480. What economy of gold would take place by the issue of 1*l.* notes?—That gold would not circulate but 1*l.* notes would.

1481. The gold would remain in the Bank of England?—To be utilised if needful by the bank. It would not be worn in circulation.

1482. Is it not the case that in America they have ceased to coin gold coins of less value than 5 dollars?—I am not sure. They have $2\frac{1}{2}$-dollar pieces; but it may be as you say, I do not know.

1483. They have ceased the last few years to coin $2\frac{1}{2}$-dollar pieces which are equal to our half-sovereign?—No; I think not.

1484. You made a statement in the House of Commons, to which I think I may refer, as to the light gold constituting a lock-up, and therefore an outlay to this country to the extent of 10,000,000*l.* sterling, that 10,000,000*l* of gold was useless in this country in consequence of the quantity of light gold held by the banks. Do you consider that has any bearing upon the question of an appreciation of gold?—I think it has a bearing. I have mentioned that in the House of Commons. I originally fixed it at about 5,000,000*l.*, but from information I have collected, and from my own experience in the years that have passed since then, I am inclined to think that quite 10,000,000*l.* of gold are held in excess of the requirements through the coins being light. I have had it put at even a larger sum, but then it was from an Irish bank, and I believe in Ireland the light gold is a very excessive proportion of the circulation.

1485. You spoke of the practice of sending sovereigns backwards and forwards at term times to Scotland. Does not that "sweat" the sovereign, to use a common expression, and reduce its weight?—That is only because the Bank of England has a great number of sovereigns which only just turn the scale. It is not worthy of notice if it were not that when the sovereigns come back some are cut in consequence of the amount of wear by being sent backwards and forwards. Excepting that our sovereigns wear away quicker than others on account of their composition being softer than most other gold coins, it is very unimportant. The Bank of England must possess many millions of gold that can barely pass the scale. Of course if they weigh them again they would cut some of them, or ought to do so. If you take them out and send them anywhere and bring them back again there would be some light, because they are already in many cases on the verge of disqualification.

1486. (*Mr. Courtney.*) As I understand your evidence, the outcome is that there is a movement in the economy of metal abroad by the development of banking?—I think it is more an economy in the use of bank notes than of metals, because, having bank notes, they would very rarely send metallic money from one part to the other.

1487. You spoke about the *Crédit Lyonnais* having branches throughout the country, and of tradesmen having accounts with these branches. Do the tradesmen draw cheques on the branches?—Yes.

1488. In payment of the sums payable within their own area?—Or they will give cheques on the different branches at very trifling cost.

1489. But before that usage would not they keep a store of coin and make payments in coin?—Bank notes. They would not necessarily keep coin when they have Bank of France notes of every denomination. The economy of all trading facilities is in making the use of bank notes necessary rather than of actual coin; where they have convertible paper.

1490. Substituting cheques for bank notes?—Yes, and movements in Germany through *Giro Conto*. That is so important a facility that it prevents the

transmission of bank notes from one city to the other.

1491. Is there any observable contraction in the issue of notes?—I do not think so. There may have been even an extension in Germany on account of trade having improved. The German foreign trade has very largely increased.

1492. But confining our attention to France, where these societies have their branches, is there any observable contraction in the issue of the notes of the Bank of France?—I think there may be some variation. In 1884 there were 3,101,000,000 issued, and in 1886, 2,913,000,000 francs. There is a slight diminution in 1886, something like 3,000,000*l.* sterling.

1493. That might be attributable to other causes?—Yes.

1494. You do not notice a general contraction going over many years?—No.

1495. With respect to the small notes, which you say have been withdrawn in France, when were they first issued?—I can only speak from memory. I think the 25 franc notes have been withdrawn some three or four years.

1496–7. When were they first issued?—They had been issued a considerable number of years previously.

1498. 50 francs is the lowest now?—Yes.

1499. You think that the 50-franc limit is not a recurrence to an old limit?—In fact, in the time of the First Republic, they had only paper assignats.

1500. Is the usage in Germany for merchants selling to retailers to draw bills?—Yes, and in France especially. For any sum, however small, the seller draws on his buyer however distant he may be, from one part of the kingdom to the other. He will draw a bill, and the bill may be collected through the Post Office.

1501. But bills with a certain amount of time to run?—Yes, generally.

1502. Is the usage to have them payable at one centre?—No, it is quite the reverse, because almost all over the Continent you will find more bills drawn on a city which is not a capital. For instance, there are more bills drawn on Hamburg than there are on Berlin; there are more bills drawn on Marseilles than there are on Paris.

1503. There is a decentralising influence in banking in France and Germany?—Yes; also in Belgium. There are more bills drawn on Antwerp than on Brussels.

1504. Having regard to the economy of currency, whether coin or notes, would not there be a great economy if there was one centre of liquidation established?—Yes, there would; but on the other hand there is a certain reserve in money being held in each city which makes the transactions more solid. Credit is not used up to the hilt as it is in this country.

1505. Quite so. That is a confession that there is a capability of economy?—Yes, but it has its drawbacks.

1506. If we had all payments in coin there would be great solidity?—Yes.

1507. Is there any movement in favour of the establishment of a centre in Germany?—I think not. I very rarely see bills drawn made payable in Paris in preference. They are drawn on the places to which the goods are shipped, such as Havre, Bordeaux, Marseilles. They would be drawn on those cities and they would very rarely be made payable in Paris.

1508. With regard to that phenomenon to which you drew attention, the periodic transmission of bullion from London to the sister kingdoms, is not that due to the fact of the establishment, in a large degree, of a common centre of liquidation?—It is due to the law that requires that the banks should hold gold against the excess of their note issue in Scotland.

1509. Quite so; but how has the coin got to London?—It simply travels twice a year. There is no necessity for the coin in Scotland at ordinary times. It is simply on those occasions twice a year when there is a large demand for notes. The Scotch banks, as a rule, have the gold in the boxes and simply send it back again, pay the freight to and fro, and cause a disturbance of the money market.

1510. Yes; but if there existed in Scotland and Ireland, the United Kingdom in fact, many centres of liquidation of bills, as in France and in Germany, you would have retained stores of coin at these different centres as the means of liquidation, and there would not be this periodic sending to and fro?—I think that periodical sending to and fro is so abnormal that you cannot deduce any argument from it. It is peculiar to the relations between Scotland and England. I think if there were centres, as you say, in different parts of the country, they would retain still only the coin that they would require for their ordinary use, and they would not keep for four or five months in the year what they would only require to use for one month. It would be a waste of interest.

1511. One of the directions in which you indicated that we might have an economy of currency of coin was the avoiding this periodical transmission?—Yes, that would be a certain and complete saving if they could issue their excess of notes against Bank of England notes, and the Bank of England kept the gold. There would be no special movement of gold at all.

1512. In order to carry that out, in Scotland, it would be necessary to have Bank of England notes of 1*l.*, would it not?—No; because they issue 1*l.* notes against sovereigns, and the sovereigns are not used at all. It is simply a foundation for their excess issue of notes.

1513. In order to have a guarantee fund against their issue, must not they have the means of liquidation in the same denomination as what they issue in?—That is if there was any chance of a run on the bank. They would, of course, require to have a currency that would be alone receivable in Scotland, but this is not an occasion of people applying to them for cash for notes, but solely for notes on credit.

1514. And then they have to get cash in order to meet the possibility of their coming back again?—Yes, quite so.

1515. With respect to this easy means of transmission of money in Germany, is that machinery self-sustaining?—It cannot pay; there is no charge at all in Germany or in Belgium. There is 5*d.* charge in Italy, but that is nominal. It is for any amount. You might have 100,000*l.* transferred for 5*d.*

1516. This is in fact a service undertaken by the State gratuitously?—It is undertaken by the bank, and, no doubt, to its ultimate advantage, because it induces or enforces almost everybody to keep an account there. Otherwise they cannot receive the money.

1517. Is the bank required by the State to give these facilities?—I should think that it is required by the State, because most State banks now are doing the same. The Italian bank has only recently adopted the same system. They can transmit money throughout Spain by means of the Bank of Spain, without charge or at a very small charge.

1518. You have no means of telling us whether a particular bank either gains or loses by these transactions?—I think the country gains, and the bank ultimately derives advantage by attracting customers.

1519. (*The Chairman.*) Would the system which you are recommending be consistent with the free development of private banks. I include, in private banks, the joint stock banks?—I should think it would be an interference with their business, decidedly.

1520. It is only consistent, in fact, with a state of things in which one national bank does almost the whole banking for the community?—It is so.

1521. (*Sir T. Farrer.*) When you speak of notes, I suppose in most of these countries a certain amount of bullion is kept against the notes?—Certainly, in every case, or else it would be a forced currency.

1522. Then the economy which is caused by the notes is an economy in the sending about of the precious metals, not an economy in the actual quantity of precious metals used?—Excepting that it is not

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usual to keep the full amount of notes issued in specie and the balance is utilised profitably.

1523. Are you aware that in America they are now making a fresh issue of small silver notes, what they call silver certificates against silver?—Yes, I know, but it is most absurd to make a distinction, because, if they are a legal tender, you can change your silver notes against gold notes, and what is the object? As a matter of fact they are at full gold value now. They must be interchangeable and therefore useless.

1524. There is complaint of the large silver dollars?—They want the half dollars. My own impression is that it will not be many years before the Americans will do away with their one and two dollar notes, perhaps only the one-dollar, and retain the two-dollar notes.

1525. Did I understand you to say that stocks are now largely used to settle international balances?—They are not used with that object, but they do furnish the means. For instance, it may be that we might owe a large amount for wine to France, and if France brought foreign stocks in London they would not require money for their wine.

1526. That is a process that largely economises the use of gold and silver?—Yes.

1527. Have you any information as to the hoarding of the precious metals in foreign countries?—The general opinion is that there is nothing of importance hoarded in Austria, Belgium, France, Germany, Holland, and Italy, with the exception of the 6,000,000*l.* war treasure in Germany.

1528. (*Mr. Fremantle.*) To return for a moment to the question of sending gold to Scotland at stated periods, is not that transmission due to the fact that the circulation of gold coin is very limited, and 1*l.* notes largely used, and that therefore the only way to obtain gold to show the Government inspector is by importing it, so to speak, from England?—That is so.

1529. And that would have to be done under any system of banking, would it not?—If, for instance, a Scotch bank, instead of receiving 50,000*l.* of gold, had a certificate from the Bank of England that they held 50,000*l.* at their disposal in the bank, it ought to answer a similar purpose.

1530. But as matter of fact, in banking, to hold bullion generally means actually to have bullion in stock, does it not?—Yes.

1531. Can you tell the Commission whether there is any agio on gold coin in France as against silver coin, or whether they are freely interchangeable all over France?—Not in general circulation. The general circulation in France is indifferent; you receive gold and silver indiscriminately.

1532. I think you said that in America there was certainly no premium as between gold and silver notes?—I take it there cannot be, because the moment they are declared a legal tender, then if there is a plentiful supply of all kinds of legal tender, they must be interchangeable.

1533. It would depend upon the supply. If the supply of silver notes were very large they might go to a discount as against gold notes?—No, because you see the currency is only at a premium for abnormal uses. Gold is at a premium for exportation or for hoarding; therefore, unless there was a panic or something in favour of gold, you would not have gold tender notes at a premium, because gold would only be at a premium for exportation.

1534. Could you tell the Commission whether you think the transmission of coin could be largely saved by an extension of the postal order system in this country?—I do not think so; postal orders are very useful, and I think the charge is moderate; but it is very seldom I think that large amounts could be sent through the post in the form of coin.

1535. (*Sir John Lubbock.*) Have the reasons which have induced the Bank of France to withdraw their small notes been placed upon record?—I can only speak from memory. But I believe it was because they were badly made, and consequently were more frequently forged than the larger notes. All over Europe, and perhaps all over the world, the 20-franc, or some similar note, is very much used.

1536. Can you tell us whether it is the case that in Italy there has been found to be much forgery of very small notes?—I have particulars about forgeries, and they are very insignificant as a rule.

1537. Could you put in any particulars on that point?—Yes, I could. I have the fullest information with regard to the cost of small notes and with regard to forgeries.

1538. I had understood that there was a considerable amount of forgery of the small notes of the Banca del Popolo?—I believe you are right, that the private bank notes have been forged. They are badly-made notes.

1539. Then with reference to the facilities for the transmission of money from place to place in this country. You are aware that, by means of the country clearing, if a person in Birmingham, for instance, has to make payments in Liverpool, or anywhere else, he can draw a cheque on his bank and transmit that through the post to the person to whom he has to make payment, and no charge is made for the transmission?—If he has a banking account.

1540. So that practically the facilities for banking are as great as those in Germany?—Yes.

1541. As regards other transactions, they can be effected by means of postal orders, as you yourself said, at a moderate charge?—Yes, but there is no provision made in this country for a man who has no banking account dealing, say, with a manufacturer in London. Unless he had a banking account he would have no machinery for collecting his account, therefore, for the small trader, the facilities are not so great in this country.

1542. But most small traders have banking accounts?—I should think a great number of small traders in the East end never have a banking account. Small transactions for 1*l.* or 2*l.* could not take place with the same facility in this country as they could in France or Germany. No banker would care to be troubled with such small amounts.

1543. But your case is this. A very small man who has not a banking account has 1*l.* owed to him by a person, say, in Sheffield. If they both had banking accounts and the man saw fit to have his account paid at once, the man would get his cheque immediately. If they had no banking accounts the man who owed the money could get a postal order at once and the other would receive the money?—It is easy enough for a man to pay his account by means of a cheque, but it is not so easy for a small man to collect what is due to him.

1544. I quite understand if the man in Sheffield does not wish to pay there might be difficulty in forcing him to pay, but if he did wish to pay there would be no difficulty by a postal order?—Except that there is delay. If a bill is presented to a man through the Post Office he would pay it at once rather than have it returned protested. One of my correspondents in France says that there is an enormous amount done in small commerce between different parts of France by small traders, who are assisted immensely by the Post Office.

1545. Then would you advocate that the moment a person owed another person money, that other person might be able to draw upon him without notice through the Post Office?—It depends on the necessities of the case.

1546. With regard to insurance. You are aware that letters transmitting valuables in this country can be insured for a very small sum?—Not so small as I mentioned in the case of Belgium.

1547. Is there much difference?—I should think that the lowest charge in this country would be 6*d.* per cent., 5*s.* per 1,000*l.*, and in Belgium it is 2*s.* per 1,000*l.*, less than half. But I must say that in France it is 2*s.* per cent. It is only in Belgium that the charge is so moderate.

1548. Now, with regard to the question of the Scotch banks and the amount of gold sent down, I think you have already stated that you do not attach any importance to the wear and tear of the gold sent down and coming back, because that is practically very slight. Your allegation is that the fact of the Scotch banks having to transmit gold down to Scotland, absorbs gold and disturbs the money market?—In some degree, yes.

1549. But supposing that they were to take bank notes. Under the present law the Bank of England is required to hold gold for all notes over and above a certain amount, and therefore, practically (except as regards the matter of wear and tear, which you say is immaterial), for that purpose the notes and the gold are the same, and would it not have the same effect on the money market whether the Scotch banks sent down 2,000,000*l.* of bank notes or 2,000,000*l.* of sovereigns?—No, it would not have the same effect, because it might diminish the reserve of the bank, but the bank would know where the notes were, and the exact time of their arrival, whereas very frequently the bank rate has been raised because 500,000*l.* of gold and even less has been taken out.

1550. Then you consider that though the bank is required to hold gold against all the notes, it still makes a great deal of difference whether gold is taken or not taken?—It makes a great difference.

1551. But would not the Bank of England know just as well where the notes are going as they know where the gold is going?—I do not think the bank would consider the drain of gold to Scotland serious to the same degree as a drain to the Continent, but still the effect of diminishing the small quantity of gold held by the bank is much greater than a diminution in its reserve.

1552. But my point is not as between the transmission of gold to Scotland or the Continent, but whether you actually thought it made a difference so far as the money market is concerned, whether the 2,000,000*l.* that went down to Scotland went down in the form of notes or gold?—Some difference.

1553. Do you think it would be a material difference?—It would make an appreciable effect on the money market at certain periods. The effect would not be produced if they took bank notes.

1554. Do you think from your experience that there is any case in which the Bank of England have raised the rate of interest because the Scotch banks sent down gold to Scotland, and would not have raised the rate if they had sent down notes?—If the notes were withdrawn instead of gold, and the money market was not thereby so much disturbed, then the Bank of England would only be in a better position by having the notes sent than the gold sent, and I think that the discount houses would not look upon notes withdrawn with the same degree of feeling as they would with gold being withdrawn. They might apprehend an advance in the bank rate, and so cause it.

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1555. That would be, however, an error on their part, would it not?—It would be, in fact it appears to me, very childish altogether to send gold simply to bring it back again.

1556. I now gather that, in your opinion, it may produce a different effect on the money market, but under the existing law you think it ought not?—It ought not. I am quite of your opinion.

1557. There is no doubt that if we had an issue of 1*l.* notes in this country the stock of gold would be materially economised?—Certainly.

1558. But I gather from your evidence that, apart from the issue of notes of a smaller denomination, there is not likely to be further economy in the use of gold in this country?—You might have notes of 2*l.*

1559. If we issued notes for less than 5*l.* I have no doubt we could economise gold, but there is no other way in which you could economise gold in this country?—No, I think not; 1*l.* notes would be better.

1560. Is it not the case as regards coinage that practically no gold coin worth less than 10*s.* has ever been found to be popular?—It is so. The five-franc pieces in France have been a mistake. They are still in existence. They are costly; they wear out very much more readily in proportion, and it is a great mistake to my mind to have gold coin under about 10*s.*

1561. (*Mr. Fremantle.*) Is it not a fact that the coinage of gold five-franc pieces has been discontinued by the last Convention of the Latin Union?—I believe they have discontinued coining them, but they are to be had. My firm had a large quantity recently. They are used, I think, more for ornament than for use.

1562. (*Sir John Lubbock.*) Therefore you do not think gold pieces of less than 10*s.* are ever likely to come into extensive use?—That is my opinion.

The witness withdrew.

Adjourned till Friday, February 4th.

Eighth Day.

Friday, 4th February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P.

MR. GEO. H. MURRAY, *Secretary.*

MR. HENRY WATERFIELD, C.B., was called and examined.

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1563. (*The Chairman.*) You are Financial Secretary, are you not, at the India Office?—I am.

1564. And you come here as representing the case of the Government of India?—Yes.

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1565. The difficulty of the Indian Government in one word is that they have a certain number of fixed charges to pay in England in gold, that they receive their taxes in silver, and that therefore they suffer heavily by any fall in the price of silver relative to gold?—Yes, that it enhances the number of rupees that they have to pay.

1566. Could you give us the figures of the Indian Budget illustrating that position?—According to the budget of 1886–7, the gross revenue is estimated at 75,798,700*l.* (I may say that, in speaking of pounds, I mean tens of rupees, unless I expressly say that they are sterling figures.) That figure of 75,798,700*l.* includes the railway and other departmental receipts of all kinds, which are more strictly a set-off against payments than real revenue.

1567. I suppose railway receipts mean the receipts from the traffic on railways belonging to the Government?—Belonging to, or guaranteed by, the Government.

1568. But what are departmental receipts?—I may take as a case the contributions by the officers of Government towards their superannuation. That is a receipt under superannuation, which is a set-off against the charge for superannuation. It is included in the gross revenue, but is more strictly a deduction from the charge for superannuation. In the Indian accounts all the figures are entered gross, and, when I speak of the revenue being 75,798,700*l.*, I am including all receipts of any kind; but, in order that the Commission may understand the real financial position of India, I shall proceed to explain it on the net figures, by deducting from the amount of the principal heads of revenue the cost of collection, and by deducting from the expenditure the receipts in each particular group. For instance, there is a receipt from interest on loans by the Government which comes in as a credit, but which is set off against the charge for interest. That kind of set-off runs through almost every head of the accounts.

1569. Quite so. You deduct, of course, the cost of working the railways?—In the case of the railways (which appear on the side of net expenditure), I deduct their receipts from the cost of working them (including the charges for interest); in the case of irrigation, I deduct the sums received from those who take the water, the water rents, from the charges; and so in every case. Under army, the sale of stores is a receipt, but I treat it as a set-off against the charge.

1570. Estimated in that manner, what is the net revenue?—The net revenue is 44,249,900*l.*, of which nearly 2,000,000*l.* is appropriated to local purposes.

1571. That is to say, it is paid back to the provincial governments?—No, that is another point altogether. I mean by local purposes that it is only received by the Government on condition of being spent within the district in which it is raised.

1752. In fact, they are what we in England should call local rates raised by the central government?—Quite so.

1753. All this revenue is received in silver?—Yes, the whole of it.

1574. What has been the increase in the last 10 years in the net revenue?—In 1876–7 the net revenue was 38,215,000*l.*; in 1886–7 it was estimated at 44,250,000*l.*, so that the increase in the 10 years has been 6,035,000*l.*

1575. Would you explain under what heads this increase should be classed?—The land revenue has increased by 2,180,000*l.*, but the receipts for 1876–7, owing to the famine, were less than in the previous year by 1,650,000*l.*, so that the true increase of the land revenue in the 10 years may be taken as only 530,000*l.*

1576. Perhaps you will explain to us, before we go further, how that increase has taken place? The land revenue is chiefly under settlement, is it not?—It is under settlement. In the case of the great province of Bengal it is a permanent settlement. In the larger part of India it is settled for periods of 20 to 30 years.

1577. Is this 530,000*l.* increase merely an increase of rents during that time, then, in the rest of India?—In some of the districts the settlements have expired, and have been resettled, involving a larger payment to the Government. In some cases of estates under permanent settlement, default has been made, and the Government have taken possession of the estates and received the revenue, and in that way been able to raise it. But, as a rule, it comes from a fresh settlement having been made on the expiry of the old settlement.

1578. An increase of rent at the end of a lease, in fact?—Yes.

1579. Would you go on with the several heads?—Under excise there is an increase of 1,596,000*l.* Under assessed taxes and provincial rates there are increases of 1,385,000*l.* and 984,000*l.* respectively, owing to the special taxation imposed in the years 1877–8 to provide a surplus for insurance against famine, and imposed this year to meet the additional military expenditure.

1580. This additional taxation to meet these two exceptional causes of outlay is derived from assessed taxes and provincial rates wholly, is it not?—Yes; I have put these two cases together, because they are the only two in which additional taxation has been imposed.

1581. What are provincial rates?—They are levied on the land and usually collected with the land revenue, but applied to local purposes, such as education or hospitals, or the construction of roads, in the district, and in Bengal there is a rate for public works throughout the province; but at the time when the special taxation was put on to meet the charges for famine, a provision was made that a small portion, not to exceed 10 per cent. of the funds, might be taken for general purposes throughout the province, and a further rate varying from 1 to 4¼ per cent. on the annual value of the land in Northern India was imposed to meet the charge for famine throughout India.

1582. Is that paid into the provincial exchequer or to the central exchequer?—The whole of the revenue of India is collected by the provincial governments for the central government, and the allotment between the central and provincial governments is a special arrangement which the Commission, I think, need not trouble itself about, because for the purposes of Goverment it may be considered as all general revenue.

1583. Provincial rates are in fact a land tax put on in addition to the fixed land revenue?—Yes, but on condition that it shall be appropriated to specific purposes. It is not available for expenditure on general purposes.

1584. Would it have been supposed to have been a novel interference with the contracts entered into between the Government and the cultivators of the soil if it had been applied to general purposes?—It would have been, except for the very special purpose of provision against famine, and there it was justified on the ground that, as it could not be said in what district a famine would occur, it was fair that the whole province should contribute towards the famine charges throughout India, but with that exception the provincial rates are appropriated to expenditure within the district or province in which they are raised.

1585. The distinction seems rather a subtle one; however, it is hardly within our province?—If the Commission would like it, I would give a short explanation of the provincial system.

1586. It seems to me to have some bearing on the possibility of raising future taxation, so I think perhaps you had better?—The Government of India felt that the only way to keep down expenditure was to give the provincial governments an interest in the collection of the revenue and in the expenditure of the money; and in Lord Mayo's time, about the year 1870, the system was begun of giving to each provincial

government the responsibility for the expenditure under each particular head, according to its budget for the year, and also the advantage of the revenue which it could collect under each particular head, according to a certain proportion settled in the budget. For instance, to take the case of excise, the excise revenue is necessarily collected, entirely I may say, by the provincial government, the central government could have no influence over the larger or smaller collection, and the revenues are allotted between the Imperial and the provincial governments.

1587. I understand that the land revenue was settled in perpetuity or for fixed periods?—Yes.

1588. But in addition to the land revenue there is a land cess which is not fixed permanently or for long periods. Could that in your opinion be increased and applied to general purposes by the Government?—The land cesses which were put on to meet the provision for insurance against famine are additional to the rent which is paid by the landholder. They were put on by special legislation, for the specific purpose of providing a surplus of revenue over expenditure which shall be available to meet the charge that was anticipated on account of famine relief; but the revenue so derived was not appropriated merely to the charge for famine relief in any particular year, because it was felt that that charge would occur at irregular intervals, and that what was necessary was not to put on taxation in the year in which the charge occurred, but to have a surplus year by year which should be used either in reduction of debt or in construction of works that would keep down this charge, so that, when a famine occurred, the reduction of expenditure occasioned by the appropriation of this surplus should be equal to the charge that then arose. It was estimated that, on a series of years, 15,000,000*l.* might have to be spent in 10 years, and accordingly provision was made for raising taxes or reducing expenditure to the extent of 1,500,000*l.* each year. But the Government of India, in so appropriating it, never earmarked it for any specific purpose, because from the nature of the case that they had to meet it was impossible to do so; still I do not think that it could be said that the Government could at any moment appropriate that money to meet general purposes, unless they could satisfy themselves that they had already applied a sufficient sum to the purposes for which the additional taxation was imposed.

1589. Will you continue your enumeration of the items in which there has been an increase?—I think the stamp revenue is the next, in which there has been an increase of 803,000*l.*

1590. That is simply due, I suppose, to an increase of trade?—An increase of litigation, I may say, almost more than trade, for the larger part of it is received from stamps for civil justice. The remainder of the increase in the net revenue is caused by comparatively small improvements of 296,000*l.* under opium, which is rather a reduction of the charge than an increase of the revenue, of 253,000*l.* under forests, of 80,000*l.* in the salt revenue.

1591. Is the 80,000*l.* increase in the salt revenue due to increased consumption on the part of the people or to increased taxation?—Increased consumption, for there has been a reduction in the taxation.

1592. Would you go on with your enumeration?—An increase of 61,000*l.* under registration, and of 17,000*l.* in the tributes from native states. The latter are fixed payments made by the native states, in some cases for the maintenance of a force to keep order in the state, in some cases rather as a tribute to the paramount power, but they do not vary from year to year, except that perhaps occasionally a small sum may be commuted, or there may be fees paid on succession.

1593. (*Mr. Barbour.*) They are generally made under treaties, are they not?—Yes.

1594. (*The Chairman.*) The trifling increase is owing to alteration of treaties or expiry of old treaties?—Yes, or to accidental circumstances in the year.

1595. Do the registration receipts imply increase of commerce?—It is an indication of the extent to which the people of India have availed themselves of the power of registering their records of title, on the payment of a small fee for doing so.

1596. Would you now enumerate the items on which there has been a reduction?—The customs revenue shows a reduction of 1,242,000*l.* due to the remission of all import duties except those on salt, arms, and liquors. (I may say that the salt revenue is not credited under customs, but under the separate head of salt.) And the refunds, and assignments and compensations, have increased by 378,000*l.*, chiefly in consequence of the payments connected with the arrangements made for the salt revenue in certain native states.

1597. What are refunds, assignments, and compensations?—I have classed them together as being deductions from the revenue, but they are distinct. The refunds and drawbacks are on account of overcharges under customs or under any other head in which the payer proves that he is not liable to the charge, and the excess is then refunded to him. The assignments and compensations are, mainly, payments made to the native states as compensation for giving up their right to levy a duty on salt or transit duties on goods passing through their states, and the increase of 378,000*l.* is to a large extent to be accounted for by the arrangements made in connexion with the salt revenue.

1598. Which of these items, in your opinion, is susceptible of increase to meet any sudden emergency?—I may perhaps begin by saying what is not susceptible of increase, in my opinion. The land revenue, which is settled in perpetuity or for fixed periods, and the tributes from native states, together amounting to 19,831,700*l.*, are not susceptible of increase to meet a sudden emergency; and also it is not possible to reduce the payment of 1,301,000*l.* for assignments and compensations, which has to be deducted in order to arrive at the net revenue, so as to obtain the figures in the manner in which I am giving them to the Commission. The duties from salt, stamps, excise, provincial rates, (which last head, however, is mainly appropriated to local purposes), customs, and assessed taxes, together amounting to 18,616,500*l.*, *might*, perhaps, be increased if absolute necessity arose, but the Government of India have stated their opinion that such a measure at present is open to the gravest objection.

1599. The objection being, I suppose, the discontent that would be aroused if taxation were increased?—Certainly; and also I must remind the Commission that it is not possible to put on taxes and take them off again, as the exchange fluctuates from time to time. Therefore I hold that such taxes can hardly be held as capable of increase to meet a sudden fall of exchange. The net receipts from forest and registration are petty, amounting to only 526,200*l.*, and are of an administrative character, not being exacted for purposes of revenue, though the charge for registration could be increased within certain limits. There only remains the opium revenue, 6,576,500*l.*, which it has sometimes been supposed would improve with the fall in the price of silver; but the payment per chest at recent sales in Calcutta has been lower than at any time during the last seven years.

1600. The fact being, I suppose, that silver has not fallen in India?—I think to a great extent it is due to that cause, but at the same time the opium revenue is, owing to the arrangements with China, in what I may almost call a precarious state. It is, perhaps, more likely to fall than to rise.

1601. From the precarious character of the treaty relations between the powers?—I mean that the amount of revenue received from opium is dependent on the consumption in China, and is affected by the competition of the opium grown in China; and, further, the tendency of the recent treaty is to enable the Chinese Government to collect their dues more fully, for which reason the merchants exporting from Calcutta will be able to give a less price at the sales.

1602. So much for the revenue. Would you now

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give us the heads of expenditure?—The net expenditure, by which I mean the expenditure excluding the direct demands on the revenues, that is, the cost of collecting the revenue, and the assignments and compensations, and also deducting the departmental receipts, amounted in the year 1876–7 to 40,799,000*l.*, and in 1886–7 to 44,068,000*l.* It increased, therefore, in the 10 years by 3,269,000*l.*

1603. Has this increase of expenditure been an increase in India, or in England, or in both?—In India the net expenditure has been reduced by 324,000*l.* In respect of expenditure in England there is an increase of 3,593,000*l.*, of which the sterling expenditure accounts for an increased expenditure of 1,081,000*l.*, and the exchange is heavier by 2,512,000*l.*

1604. (*Sir T. Farrer.*) Is that 2,512,000 sterling or tens of rupees?—It is not exactly either. The addition of 1,081,000 to the 2,512,000 will give 3,593,000, which is the number of tens of rupees that has to be paid for the expenditure in this country, but, if you observe, the figure that is added to the sterling is not exactly either sterling or tens of rupees.

1605. (*The Chairman.*) The sterling expenditure of India in England has increased by 1,081,000*l.*, and the amount of extra rupees it has got to pay in order to liquidate that debt in gold is 3,593,000?—2,512,000 has to be added to the 1,081,000 in order to find the amount of tens of rupees that the sterling expenditure costs. In order to defray the gold payments in England, it is necessary to remit from India 3,593,000 tens of rupees.

1606. Instead of 1,081,000*l.* as you would have had to remit, had there been no alteration in the exchange?—Had the rupee been worth 2*s.*

1607. The rupee, I think, never has been worth 2*s.*?—Not for nearly 30 years.

1608. So that in reality part of this loss by exchange implies no additional loss through the fall of exchange at all, part of it has always existed, ever since the rupee has been really worth 1*s.* 10*d.* whilst estimated to be worth 2*s.*?—Part of the charge for exchange; I would not call it loss by exchange.

1608*a*. (*Mr. Cohen.*) I think that 2,512,000*l.* is the increased charge in 10 years, not 30 years?—Quite so. For nearly 30 years I said the rupee had not been actually worth 2*s.*

1608*b*. 2,512,000*l.* is the actual increased charge from the fall of the exchange in 10 years. It does not go back to the time when the rupee was 2*s.*?—It is the actual increase in 10 years.

1608*c*. (*The Chairman.*) What you give is the amount that has to be added to the sterling expenditure in order to give the tens of rupees which that sterling expenditure costs?—Yes.

1609. How has this reduction of expenditure in India been attained?—The net military expenditure has increased by 1,531,000*l.*, and the net charge for civil departments by 1,393,000*l.* On the other hand the charge for interest has been reduced by 1,679,000*l.*, and the railway revenue account is better by 1,026,000*l.*, while the charge for famine relief and insurance is less by 783,000*l.* Under the remaining heads there has been an increase of 240,000*l.*, and the final result is a reduction to the extent of 324,000*l.*

1610. The diminution in the charge for interest, I suppose, simply corresponds with the diminution in the capital debt?—That, again, I am sorry to say, is rather complicated. The practice with regard to the public works is to treat the amount of capital expenditure on railways during the year as debt borrowed for the public works, and to charge interest thereon in the railway revenue account. It frequently happens that the Government has not really borrowed to the full extent of the capital expenditure, but has defrayed part of it from revenue or deposits; and, by dividing the debt into two parts, ordinary debt and the public works debt, adding to the ordinary debt the real amount of the loan, and withdrawing from it the amount of capital expenditure which is put to the public works debt, the ordinary debt may actually be reduced, and in most cases is reduced on the result of the year, so that the charge for interest on debt, as distinguished from that chargeable to the public works, has been reduced in the 10 years by 1,679,000*l.* There has been an increase, perhaps corresponding roughly to that reduction, in the railway and irrigation revenue account, which has been paid for by the receipts from the public works.

1611. Against the public works account?—The public works account, not the railway account solely, but the public works account generally. The capital is charged against public works. The interest on that part of the debt is charged against the railway and irrigation revenue account.

1612. But the railway revenue account has improved, has it not?—It has improved in the 10 years to the extent of 1,026,000*l.*

1613. That is due chiefly, I believe, to the increase of traffic?—And also to the opening of fresh railways and the traffic on them.

1614. The diminution of 783,000*l.* for famine relief and insurance, how comes that?—The charge for famine relief itself in 1886–7 is very small indeed; happily, owing to the good harvests in India, there has been very little in the last few years, but in 1878 an arrangement was made by which 1,500,000*l.* should be provided from revenue to meet the charge for famine and insurance. In the year 1876–7, with which I have been comparing the present year, there was a very heavy charge for famine relief, amounting to 2,145,000*l.*; and, as 1,500,000*l.* is now charged altogether, of which 138,000*l.* is debited to the railway revenue account, the charge under famine relief and insurance is 1,362,000*l.*, or less by 783,000*l* than in 1876–7; but, of that 1,500,000*l.* only 1,000*l.* is estimated to be spent on the direct relief of famine, and all the rest is set aside for the reduction of debt or construction of works calculated to relieve famine.

1615. The increase in the military expenditure is due, I suppose, in the main to recent events in connexion with the north west frontier?—Yes, very largely.

1616. But part of it is directly due to the fall in the exchange, is it not?—Owing to the practice of fixing the daily pay of the British soldier in sterling, and to the Treasury annually determining the rate of exchange at which that pay shall be converted into rupees, the rate being based on the gold price of silver during the previous year, a charge of 284,000*l.* has been included in the estimate for 1886–7, which would not have been incurred but for the fall in exchange.

1617. (*Mr. Courtney.*) Would there be no sum in 1876–7?—In 1876–7, the soldier was paid at the rupee rate fixed for his pay which had existed for many years. A few years ago when the exchange began to fall so heavily, the soldier complained that he was not receiving in silver the equivalent of the rate of pay to which he was entitled as a British soldier; and, on that complaint being examined, it was agreed that the rate which was adopted by the Treasury in regard to Hong Kong, and other colonies where British soldiers are paid in silver, should be the rate of exchange used in determining the amount of the pay of the British soldier in India, and that his pay should be increased so that he should receive for his daily pay the gold value of the silver to which he was entitled under his contract.

1618. When was that made?—This arrangement was made with effect from the 1st of January 1884. This is the fourth year in which the additional pay has been given.

1619. The fact is that the soldier's pay in India in rupees has been increased on the ground that the rupee does not go so far in India?—No, that was not admitted, but on the ground that without a certain increase he did not receive the equivalent in silver of the gold payment to which he was entitled.

1620. (*Mr. Birch.*) He was entitled to the twentieth

part of a sovereign?—Yes, for every shilling due to him.

1621. (*Mr. Courtney.*) Then you hold that he gets more than he would have got?—He gets more than he would have got under the former system, and he gets more rupees than he would get if the exchange had not fallen.

1622. Under this contract he really gets substantially more, or what goes for more in India, than he would have been entitled to, if there had been no fall in exchange?—Yes.

1623. (*Mr. Birch.*) Will you tell us what that exchange is?—It varies. It is fixed on the gold price of silver in the previous year. The rate this year is 1*s.* 7*d.*, but it is fixed for the year that is coming at 1*s.* 5½*d.*, the year beginning on the 1st of April next. It is fixed in January 1887 on the silver price of 1886.

1624. (*Mr. Courtney.*) The only point I wished to bring out is, that in your opinion the soldier in consequence of this legal contract is getting more daily pay than he formerly got?—As measured by rupees, he is. He is getting the twentieth part of a sovereign daily. If that sovereign is worth 12 rupees instead of 10, he gets the twentieth part of 12 rupees instead of the twentieth part of 10.

1625. (*Sir T. Farrer.*) And the Indian soldier does not get that?—The Indian soldier does not. In the pay of the native soldier there is no alteration.

1626. (*The Chairman.*) Could you give us the details of the increased expenditure in England?—In the railway revenue account, that is, in the payment of interest to the railway companies, including the annuities granted on the purchase of lines constructed by them and interest on the stock issued in exchange for portions of the annuity, there is an increase of 634,000*l.*

1627. Is that for guaranteed interest?—The payment of interest to the railway companies is the guaranteed interest; but in some cases the Government have bought the lines which were constructed by guaranteed companies, and now own these lines on condition of paying annuities to the former shareholders.

1628. Will you go on to the next item?—In the interest on the debt not charged against railways and irrigation works the increase is 303,000*l.*

1629. That implies an increase of the ordinary debt?—It is due to an increase of the ordinary debt.

1630. I thought you had been paying off that debt during the last 10 years?—Not the sterling debt. We have converted some into debt bearing a lower rate of interest, but on the whole I am afraid there is no reduction.

1631. The next item?—The charge for civil superannuation in England is increased by 338,000*l.*; and in other heads, except the army, the net increase is 11,000*l.*, while the army charges are less by 205,000*l.* than in 1876–7.

1632. To what is due the increase in the civil superannuation in England?—Partly to the fact that the civil officers not belonging to the covenanted civil service, who were engaged after the Government of India was taken over by the Crown, and when the country was being considerably developed, are now completing their service and coming on the pension list; but the greater part of the increase is caused by the Government having closed the civil funds and assumed their liabilities, and also by the covenanted civil servants, who used to draw their annuities in India, having, when the exchange began to fall, preferred to draw them in England. They had that option, and they have taken the gold payment instead.

1633. They had the option of drawing them in gold?—They received 1,000*l.* a year in gold, or what had been fixed as its equivalent in rupees in India.

1634. (*Mr. Fremantle.*) What was that equivalent?—10,666 rupees in Bengal, 10,650 rupees in Madras and Bombay.

1635. (*The Chairman.*) The army superannuation charges, I think, you stated were less by 205,000*l.*?—Yes.

1636. Considering that the army expenditure is generally largely increased, is not that rather a remarkable fact?—It is due in a great measure to the exceptional arrangement with regard to the non-effective charges. It used to be the practice for the Government of India to pay to the War Office every year the capitalised value of its share of the amount of non-effective charge that came on during the year, so that in any given year, 1880 we will say, they paid the capitalised value of the amount chargeable to India in respect of all the pensions of soldiers or officers who came on the pension list in that year. The payment in 1880, therefore, wiped off for ever the pension charge for India on that account, and, taken over a series of years, it was not an unfair arrangement. But the Treasury found that the arrangement for certain reasons did not suit them, and about two or three years ago they terminated that arrangement, and now we pay not the capitalised value, but the estimated proportionate value of the charges for each year. The result was that, in the first year in which that occurred, instead of paying perhaps 800,000*l.* for pensions, we only paid 80,000*l.* In the second year we shall pay, perhaps, 160,000*l.*, and after 10 years we shall be again paying our 800,000*l.* or more. But during these intermediate years there is a very considerable reduction under that head.

1637. But it is a purely nominal reduction?—It is a nominal reduction due to the fact that the charges for this year were paid some years ago.

1638. Quite so; it implies no economy in the home charges?—It implies no economy.

1639. What has been the average rate of exchange at which remittances have been effected during the last 10 years?—Remittances in 1876–7 were effected at approximately 1*s.* 8½*d.* the rupee.

1640. Supposing the sterling expenditure in England had remained unchanged during those 10 years that you have been dealing with, how much would the Indian taxpayer have been saved?—If the sterling expenditure in 1886–7 had been the same as in 1876–7, but the rate of exchange had fallen from 1*s.* 8½*d.* to 1*s.* 6*d.* the rupee, the charge for exchange would have been increased by about 2,157,000 tens of rupees. The actual increase has been 2,512,000; therefore 355,000 is due to the increase in sterling expenditure, and 2,157,000 to the exchange.

1641. (*Mr. Courtney.*) The 1,081,000*l.* sterling expenditure by which the net expenditure in England has increased, has caused an increase altogether in tens of rupees of 2,157,000 plus 355,00?—Yes, the increase of sterling expenditure coupled with the fall in exchange.

1642. (*The Chairman.*) Does this increase represent a real burden thrown upon the Indian Exchequer?—I must explain that the symbol for pounds sterling is used in the Indian accounts, but that the figures are really tens of rupees, with the exception of the explanation I was giving just now regarding the expenditure in England. The receipts and the expenditure in India are in tens of rupees. The payments in England are divided into two columns, one being the sterling and the other the addition for exchange. The aggregate of the two columns headed England and exchange is in tens of rupees; and the total is in tens of rupees, so that any increase in the number of rupees required to meet the payments in England is a real burden, whether it arises from a larger expenditure in sterling, or from an enhancement of the number of rupees required for remittance to defray a like amount of sterling expenditure.

1643. It represents a real burden upon the Indian Exchequer, but the figures do not represent exactly what that burden is?—No, the increase of the figures will represent the increase of the real burden, but the whole figure put down under exchange must not be considered as a loss.

1644. Could you give us any illustration of the extent to which the burden affects the Indian Exchequer?—The net expenditure in England in 1876–7 was 13,230,000*l.*; supposing that it had been

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fixed at that amount for the next 10 years, and that the rate of exchange had remained at 1*s.* 8½*d.*, it would have cost the Government of India 15,483 lakhs of rupees to pay in England the sum of 132,300,000*l.* sterling in that period. At the rates which have actually prevailed, and taking the budget estimate of 1*s.* 6*d.* for this year, the remittance of 13,230,000*l.* annually would have required 16,309 lakhs, so that 826 lakhs of rupees, or nearly 83,000,000 rupees, of taxation has been levied during the decade on account of the fall in exchange, apart altogether from what may have been needed in consequence of an increase in the sterling requirements.

1645. You would regard that as a very serious addition to the taxation of any country, and especially serious in the case of a country like India which finds it extremely difficult to augment its taxation?—Exactly so.

1646. Besides the embarrassment and difficulty in which the Indian Goverument are thrown for this reason, what effect on the practical administration of the finances of the country has this uncertainty produced?—I think it is the uncertainty which is almost a greater evil than the actual charge, although the actual charge is very serious. But, owing to the uncertainty, it is almost impossible for the Government of India to form accurate estimates of the charge which has to be met from year to year.

1647. Would you give us an example of that?—Taking the two last years,—when the budget for 1885–6 was under consideration, it was necessary to fix a rate at which the remittances to England during the year should be estimated. In 1882–3 and 1883–4 the average drawing rate had been above 1*s.* 7½*d.*, and in the year then closing it had slightly exceeded 1*s.* 7¼*d.* For the sake of prudence, however, it was taken at 1*s.* 7*d.*, at which rate the amount needed to defray the net expenditure in England in 1885–6 was 1,788 lakhs of rupees. Exchange fell to an average of 1*s.* 6½*d.*, requiring for the same sterling expenditure 1,862 lakhs, so that the Government of India had to meet a charge of 74 lakhs (740,000 tens of rupees), entirely beyond their control, for which no provision had been made. Again, in framing the budget for 1886–7 exchange was estimated at 1*s.* 6*d.*, at which rate the nett expenditure in England, which only exceeded the estimate of 1885–6 by 177,300*l.*, would have required the remittance of 1,911 lakhs. Before the end of March, however, exchange fell below 1*s.* 6*d.*, and with very little intermission it sank till it touched 1*s.* 4⅛*d.* in the beginning of August. The average rate up to the present time is about 1*s.* 5⅓*d.*, at which rate, supposing that it should prove to be the average for the whole year, the same sterling expenditure would require 1,976 lakhs, or an excess of 65 lakhs (650,000 tens of rupees), for which provision has not been made.

1648. This condition of things has, of course, occupied the attention of the Indian Government for some time past. What remedies have been proposed for meeting it?—The first possible course for adoption, which has been under the consideration of the Government is, whether the revenue should be increased by imposing additional taxes; but, as I have already said, such a step is considered to be most impolitic, at the present time particularly. Secondly, there is the question of whether the expenditure shall be met by raising a loan; besides adding to the general indebtedness, and consequently to the future charges, that remedy would, if the money were borrowed in England, aggravate the evil by increasing the remittances in subsequent years. The third remedy is to reduce the expenditure; but I must point out that in that case the reduction, if it is to be at all large, can only be effected by suspending public works, which implies the arrest of the progress of works greatly needed for the various branches of the administration, or the provision of roads, or other material improvements; throwing out of work bodies of labourers who have been collected at considerable expense, and rendering idle the highly paid supervising establishment, so that much money would be wasted. The fourth possible course is to suspend the operation of the famine insurance, that is to say, to take the revenue which is annually devoted to the redemption of debt incurred on account of famine, and to the prosecution of railways and canals designed to protect the country against famine, and to use that money in defraying the additional cost of making the remittances to England.

1649. We have already discussed to a certain extent the policy of the last course, but I understand your view to be that it would have the double evil of preventing that process of paying off the debt for famine which is now going on, and also of being something in the nature of a breach of faith with the people of India?—It is open to both these objections, although it would perhaps not be right to say that it is literally a breach of faith, because no exact promise has been given; but certainly the understanding was that the additional taxation, which was put on for the purpose of defraying the recurring charge for famine relief, was to be devoted to meeting the specific charge caused by the increase of famine expenditure.

1650. Is that understanding one that obtains merely in Government circles, or is it one to which the Government and the people are parties?—It is one which was not merely recognised by the Government, but very greatly pressed by the native members of the Legislative Council at different times when the question has been under consideration.

1651. And I suppose the fact that, as you have already explained to us, this land cess for famine purposes is rather an exceptional kind of tax, brought home to the people of India the fact that it is earmarked for this particular purpose?—Quite so. It is viewed to a great extent by them in that manner.

1652. And they would not tolerate what is practically an addition to the land tax for general purposes, except on the conditions which you have already stated?—It is very doubtful whether it would be accepted without great discontent.

1653. How has the uncertainty in the ratio which obtains between silver and gold affected the borrowing power of India?—As long as the ratio of value between gold and silver was stable, the Government of India was able annually to borrow in rupees the sums it required for the prosecution of public works, though, doubtless, a large part of the loans may have been subscribed by capitalists in England. When the fall occurred in the price of silver as measured in gold, and with it in the gold value of the rupee and of rupee securities, and the uncertainly of the future sterling value of such investments became apparent, the Government of India reported their inability to raise the requisite sums in India; and consequently in recent years recourse has been had to borrowing in sterling. It is evident that the burden of the interest on loans contracted in sterling continually increases as the exchange falls.

1654. Has that impediment to borrowing affected private enterprise in India as well as Government transactions? I understand that the English capitalist now entirely declines to lend to India, except under contract that he shall be paid the interest in gold?—As a rule that is so.

1655. Has that fact impeded the English capitalist lending to private enterprise in India?—I am afraid I can only speak from our experience with regard to local bodies, such as port trusts and municipalities. The port trusts at Calcutta and Bombay found themselves utterly unable to raise money, even with the Government guarantee, in rupee securities, and the Government were obliged to borrow the money themselves and advance it to them.

1656. I suppose that these local bodies would not have sufficient position in the English money market to borrow in London in sterling for themselves?—They could only do so at an enhanced rate, but I think that the Government would not permit them to borrow on their own account. It would be liable to so much conflict between the Government loans and the municipal loans, that I think it would probably not be thought right to permit them to come into the market

here. It would be preferable, if money was obliged to be raised here, that the Government should raise it at a cheaper rate and advance it to them.

1657. You would find it very inconvenient here to be competing in the sale of the bills with large Indian local bodies?—Yes.

1658. (*Mr. Barbour.*) And the Secretary of State refuses to allow the local bodies to borrow money themselves?—Yes, in England.

1659. (*Mr. Cohen.*) The Secretary of State has power to borrow in India without coming to Parliament; but if he borrows in London he must come to Parliament?—Yes, that is so.

1660. (*The Chairman.*) The result of that is that the debt of India has increased; in other words, that the central government have been obliged to borrow in order to lend in their turn to the municipalities?—Yes; I think I should have said the port trusts, because the loan raised last year was for them.

1661. How has the fall in the exchange affected the servants of the Government?—In many cases the furlough pay is issued to the servants of the Government in rupees converted at the rate of exchange annually fixed for the adjustment of transactions with the British Government, which is based on the mean cost of sending a remittance to and from India at the time that the rate is fixed; and, therefore, the lower the rate of exchange falls, the less is the sum which they receive as the equivalent of their pay in rupees. The pensions of civil officers, other than those in the covenanted civil service, are also paid in rupees in India, or, if drawn in England, are only convertible into sterling at the rate of exchange annually fixed in the manner I have just described. The family remittances which are authorised up to a limited amount to be sent through the Government are affected in the same manner. And all private remittances, including those of the accumulated savings of years passed in India, can only be brought to England at the price at which bills can be bought in the market. I may mention that the Government of India has recently forwarded memorials, of which 82 have been already received, from servants of the Government, praying to be allowed to make remittances at the rate of 2*s.* in the rupee.

1662. Is that rate the same as is adopted with regard to the payment of private soldiers?—It is not fixed on exactly the same principle. The Treasury fix the rate for the payment of a private soldier solely on the price of silver in London for the previous year. In this case it is a rate for payments of the Indian Government to the Treasury and by the Treasury to the Indian Government, and consequently it is based on the mean cost of sending a remittance to and from India, not only on the price of silver in London, therefore it is usually rather higher than the Treasury rate.

1663. The cost of transit is included in the estimate?—Yes; and the lower the exchange rate falls at which this furlough pay is to be issued, the less is the sum which the servants of the Government receive as the equivalent of their pay in rupees.

1664. Will you explain to us what is the distinction between a covenanted civil servant and another?—The "covenanted" civil servants are the civil servants who enter the service by public competition. They are appointed for the higher class of appointments, are paid at a much higher rate of salary, and have their pensions fixed in sterling. The "uncovenanted" servants, or the portion of the civil service which is not known as "covenanted," is in principle appointed in India, although in some cases the Indian Government apply to the Secretary of State for officers, such as educational officers and engineers, but in principle they are officers appointed by the Government of India in India.

1665. Is it not a fact that whether these uncovenanted servants suffer a loss by the uncertainty of exchange depends really upon whether silver has fallen or on whether gold has risen? In other words, if silver has not fallen, the covenanted servants get a great deal more than they bargained for; but the uncovenanted servants do not get less. If, on the other hand, silver has fallen, the uncovenanted servants do now, no doubt, get less than they anticipated?—I think I may give a general answer that that would be so.

1666. Have you any idea as to whether silver has fallen or gold risen in India?—So far as I can judge from prices in India, silver has not fallen. Prices calculated in silver have begun to fall quite lately; but till very recently I could detect no evidence of any change.

1667. Has not that fact a very important bearing upon the question as to whether this additional taxation, which is required to meet the fall in exchange, is a nominal or a real burden upon the people of India?—It has a very important bearing on the position of the people of India, as distinct from the position of the Government, if I may say so.

1668. The Government of India would be in a difficulty in raising the nominal amount of taxation, whether the real amount was raised at the same time, or whether it was not?—Yes.

1669. But supposing that silver has fallen in value, then, if they could get over the difficulty of raising the taxation, the burden on the people of India would not thereby be increased at all?—Quite so; if they could get over that difficulty. I only meant that there was that difficulty.

1670. But, if silver has, as a matter of fact, not risen but fallen, the burden thrown on the people of India, caused by what is called the loss by exchange, is not a nominal but a real loss?—Quite so.

1671. (*Sir T. Farrer.*) It is silver prices you are speaking of, not the value of silver, is it not? If the value of silver rises, silver prices fall?—I meant the silver prices.

1672. Silver prices having fallen in value, and silver having risen in value, aggravates the real burden on the people of India?—Yes.

1673. (*Mr. Birch.*) Would you say that a rupee, for instance, would buy more now in India than it did a short time ago?—Yes, to some small extent.

1674. (*Mr. Chamberlain.*) Therefore the rupee is worth more in India as a purchasing force than it was some time ago?—Than it was two or three years since.

1675. That is exactly the opposite of what one would have supposed from the alleged depreciation of silver?—No, that is not quite so. The fall in the gold price of commodities is so aggravated that it has more than overtaken the fall in the gold price of silver, but both have fallen.

1676. (*Mr. Courtney.*) Going back to the private soldier it would come to this, that he has a double advantage, one that he has more rupees given to him on the ground that the value of the rupee has fallen relatively to gold, and another that the rupee fetches more in the market?—Yes.

1677. (*Mr. Barbour.*) Prices greatly depend on the seasons, and this special fall may be due to good seasons in India during the last few years?—Yes, there have been very good seasons.

1678-9. (*Mr. Chamberlain.*) I understand you to say that there has been very little change?—I think, practically it may be said that there is no change, and that the purchasing power of the rupee in India is much the same as it was.

1680. (*The Chairman.*) But, if it has changed, it is a change in the direction of an increase, and not in the direction of a diminution?—Yes, in quite recent years.

1681. Can you put in a statement showing the amount of the remittances of the Government of India for payments on old or fixed contracts, and for payments on new or current contracts respectively?—I put in such a paper, with a note explaining the principle on which I have prepared it. (*See* Appendix VIII. A.)

1682. Have you any opinion as to the influence which the recent fall in the value of the rupee esti-

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mated in gold has had upon the export trade of India?—The average value of the exports of merchandise from India in the 10 years ending with 1855-6 was 18,184,000 tens of rupees; in the next decade it was 42,692,000 tens of rupees, an increase of 135 per cent.; in the 10 years ending with 1875-6 it was 54,151,000 tens of rupees, an increase of 27 per cent.; and in the last 10 years it has been 74,968,000 tens of rupees, an increase of 38 per cent. on the previous decade.

1683. There is no marked conformity between those figures and a theory which would make a fall in the exchange a great stimulating cause of export?—No, I could see none.

1684. (*Mr. Courtney.*) How are those valuations made?—They profess to be the real values. They are taken from the merchants' invoices, and to the best of the ability of the Government they are the real values. They have a legal power to check them, and do so as far as they can, but I have been in some cases testing them, and I find that the average value, deduced by dividing the values by the quantities, does not give the real value quoted in the markets; that may, however, be due to the fact that the average values are taken at all ports throughout the country, and that the value quoted in the prices current is the value at one particular port at the time of year to which they refer.

1685. But there has been no variation at all events in the method of valuation?—There has been no variation in the principle, but for the last 10 years more pains have been taken to render the valuations more accurate than before. Formerly they were frequently taken from tariff valuations, which were usually an under-estimate.

1686. (*Sir John Lubbock.*) Do your investigations lead you to think that the actual amount is smaller or larger than the estimated figures?—I think in the earlier years the tariff valuations, generally speaking, were under the real value.

1687. Then in point of fact the apparent increase is larger than the real increase?—I think so.

1688. (*Mr. Barbour.*) That would only be for the last 10 years?—It would only apply to the last group of years.

1689. (*The Chairman.*) But on the whole you think these figures may be trusted?—I see no reason for distrusting them generally.

1690. (*Sir T. Farrer.*) They are as good at any rate as our own in this country?—I think so.

1691. (*Sir John Lubbock.*) And you apply that opinion as well to 1855 as to the subsequent dates?—I apply the same opinion to all. But the Secretary of State in the year 1875 did call the attention of the Government to the importance of making these statistics accurate, and the Government of India promised and gave instructions to have special precautions taken, so that I think there is reason to suppose that the returns of the last 10 years are more accurate than those of former years.

1692. (*The Chairman.*) What in your view has been the principal cause of this increase?—In my opinion, the chief cause is the great development of the railway system in India, combined with the facilities afforded by the Suez Canal, and consequent reduction of freight. In illustration of that, I may mention that at the beginning of 1856 the number of miles of open railway was only 273; in 1866 it had increased to 3,569, that is by 1,207 per cent.; in 1876 it was 6,833, or 91 per cent. more than 10 years previously; and in 1886 it had risen to 12,376, or an increase of 81 per cent. on the open mileage of 1876. The railways, however, could not have facilitated the export of produce if there had not been surplus produce to export; and doubtless the abundant harvests of the last seven or eight years have greatly tended to the augmentation of the volume of trade.

1693. The fact, I suppose, that Indian exports are almost entirely of raw produce, and are bulky, and depend to a great extent upon seasons, rather supports the contention that you have just laid before us?—I think so.

1694. There are persons, are there not, who hold that a fall in the exchange gives a permanent stimulus to the export trade?—Yes, that view has been advocated in India especially.

1695. You will probably be of opinion that, if the exchange remains steady, one particular ratio of exchange is no better for the exporter than another?—I think so.

1696. But there remains the question as to whether a change in the rate of exchange does temporarily, and while it is going on, afford a stimulus to the exporter. What is your opinion on that point?—I think that such a fall does give a momentary stimulus, and that a rise on the contrary would give a momentary check.

1697. Would you explain the mechanism of that, the exact mode in which a fall does stimulate export?—A merchant in this country who wishes to bring home produce, sees that his gold will buy more rupees, and he is led to hope, therefore, for a larger gold return. He consequently gives an order for the export of produce from India, and, if the bargain is made, as it frequently is, by telegraph at fixed rates, he perhaps does make a profit; but almost immediately it is found that, to meet the reduction of gold price which occurs through bringing home commodities to a large extent, some counterpoise is requisite. It may take place in the freight, or in prices in India, or in exchange. When it takes place in exchange, where there is a fall that just countervails the reduction of gold price, the stimulus passes away at once, and the trade will then be in the position in which it was before the fall took place.

1698. Then the mode in which the stimulus acts is by exciting the hopes of the English importer?—Yes.

1699. The merchant thinks that there will be a further fall, that what has happened in the past will happen in the future; he counts upon that, and he gives a larger order to the Indian producer than he otherwise would do. Is that your view?—I think so.

1700. But would the exporter in India not be quite as capable of making a forecast as the importer in England, and would he not discount the probability of that additional fall in exchange?—I think that, as soon as the fall in exchange has taken place, and the gold price has been reduced, the fall in exchange on the one side, and in the gold price on the other, the trade then assumes its former position. If a fall in gold price occurs, the trade would be stopped, without a reduction in the exchange. A reduction in exchange is necessary in order to enable the trade to go on, and so far the trade is momentarily stimulated; but I should rather describe it as the avoidance of a check in the trade, which would have occurred had the gold price fallen without a corresponding fall in exchange.

1701. By gold price do you mean gold price of silver or gold price of commodities?—I mean price of commodities. In my opinion a fall in exchange does not occur before a reduction of the gold price, but as a consequence of the reduction of the gold price, of commodities.

1702. (*Mr. Birch.*) It has something to do with the demand surely for the commodities?—The price has to do with the demand for the commodities, not the exchange, I think, except as a consequence.

1703. (*The Chairman.*) Your view of the nature of the stimulus given to trade is that it arises simply from the expectations of profit raised in the breast of the English importer. Is that so?—Yes; the trade which would ordinarily go on, owing to there being a large harvest in India, or a want of commodities here in England, would be checked but for this fall of exchange, and therefore the fall of exchange brings the stimulus to enable the trade to go on, and removes the check that otherwise would have occurred.

1704. Then what you rather mean is, that if the gold price of everything else fell, but the gold price

of silver did not fall, there would be a check to export?—Yes.

1705. Therefore the stimulus to trade of which you spoke simply amounts to this, that silver follows the course of other commodities in falling relatively to gold?—Yes, that is my meaning.

1706. And as that does happen, a dislocation of the market, which otherwise would occur, is avoided?—Yes.

1707. The true account therefore is that a check to the Indian export trade is avoided by the fact that silver follows the price of other commodities, not that a stimulus is given to it?—That is my view.

1708–9. (*Mr. Barbour.*) Over what period does your personal experience of the finances of India extend?—I have been Secretary of the Financial Department for eight years, but in my position in the India Office I have had frequent occasion to study the finances of India for years before that.

1710. And during that period I understand you to say that you have had practical experience of the embarrassment and loss caused to the Government of India by fluctuations in the gold value of the rupee?—Yes, constantly.

1711. And you think that the evil of fluctuations in the gold value of the rupee is one of great magnitude as affecting the finances of India?—Certainly.

1712. Do you think it would be good policy for the Government of India to submit, if necessary, to a considerable sacrifice, in order to get rid of future uncertainty regarding the gold value of the rupee?—Yes, I do. I think they would be glad to do so.

1713. Have you actually known instances in which the Government of India hesitated to undertake the construction of railways required for the protection of India against famine, owing to the financial embarrassment caused by a fall in the rate of exchange, and uncertainty regarding the future of silver?—Yes, the Government of India has been hindered in its policy of developing the system of famine railways, by the additional charge caused by the fall in the exchange.

1714. And is the policy of the Government of India in regard to these railways and public works generally frequently modified owing to the financial embarrassment arising from these causes?—Yes, and I might almost say it is more than modified; it is guided to a great extent by them. The budget has to be framed with the view to the possibility of such a fall occurring.

1715. If there was a fixed rate of exchange between gold and silver, would it not be possible for the Government of India to undertake the construction of more railways and canals than they can safely do now?—Yes.

1716. Than it could with prudence safely do now?—It is so, because it would then not have to fear the possibility of an extra charge occurring through a fall in exchange.

1717. And do you think that a large extension of public works in India would be beneficial to the people of India?—Yes.

1718. Would not a large extension of public works in India also provide an additional market for iron, steel, and railway material generally?—No doubt it would, for the construction of railways.

1719. And would it not extend the field for the profitable investment of capital?—Yes.

1720. Would it not consequently be beneficial both to England and India?—I should think so certainly.

1721. Are the advantages to be derived from these sources now limited by the instability in the relative value of gold and silver?—Yes.

1722. And I think you said that the same cause tends to prevent persons whose capital is in gold from investing money in India?—Yes, they will not lend money to the Government, if the return is to be in silver.

1723. Is it the case that the silver securities of the Government of India are now brought to England in less quantities than before?—Yes.

1724. And do you ascribe this result to an unwillingness of investors to hold silver securities?—Yes, it is so. Within the last three years it has been marked. I could go further, and say that there has been a transfer of rupee securities back from England to India last year to the extent of 110 lakhs.

1725. And formerly it was the other way?—It was the other way. From 1876–7 to 1882–3 about 200 lakhs were brought over on an average every year from India to England. In the years 1883–4 and 1884–5 it went the other way, but very slightly; and in 1885–6 more than a crore went back again.

1726. I think you said that the uncertainty regarding the future value of silver compels the Government of India to borrow in gold, although its revenue is payable in silver?—Yes, in the last two years.

1727. And do you think that the increase of the gold obligations of India is a great evil?—Certainly it is, in my opinion.

1728. And if a great war or famine were now to occur in India, would not the Government of India have to borrow still more largely in gold?—Yes; they could not possibly raise money in silver, as far as can be foreseen.

1729. And that would be an increase of the evil?—Just so.

1730. I believe the Government of India has recently undertaken to make reductions of expenditure?—Yes, a commission was appointed for the purpose.

1731. Is it the case that the bulk of this reduction, so far as you know, will fall on local or provincial governments?—I believe it will fall very largely, almost entirely, on them.

1732. And I think the money at the disposal of the local and provincial governments is entirely set apart for the purpose of the internal administration?—Yes, of the province to which it belongs.

1733. Can you say whether the reduction of expenditure will be wholly or mainly a reduction of expenditure that was unnecessary, or an expenditure that did not give an adequate return in one form or another?—I have no reason to think that it was not an expenditure that was most desirable, though perhaps not absolutely necessary, and the reduction would fall on very desirable expenditure.

1734. This reduction of expenditure will involve the construction of fewer roads and bridges and the establishment of fewer schools and courts of justice and hospitals, and will generally involve a check on the progress of the country?—Yes, generally. Especially I suppose it will occur in local public works.

1735. Is it your opinion that no such check would have been necessary if exchange had not fallen below 1*s.* 8*d.* per rupee, the rate taken in the estimates of 1882–3?—Yes, there would then have been sufficient surplus to render such a reduction unnecessary.

1736. It is generally said that a fall of 1*d.* in the rupee imposes on the Government of India an additional expenditure of 10,000,000 of rupees. Is that statement correct, speaking generally?—It is approximately correct. The lower the rate on which the fall is taken, the greater is the charge. A reduction from 1*s.* 6*d.* to 1*s.* 5*d.* would be more than 10,000,000 rupees. At 1*s.* 7*d.* it was 10,000,000 rupees.

1737. Have you seen a calculation that a fall in the exchange from 1*s.* 6*d.* to 1*s.* 5*d.* per rupee would have made a difference in the estimates of the current year of more than 11,000,000 of rupees, and do you consider that calculation correct?—Yes, I think so.

1738. Do you find it possible to forecast at the beginning of each year, or from time to time, the probable rate of exchange six months ahead?—No, certainly not.

1739. In the paper which you have placed before us you have put down the excess this year at 940,000 tens of rupees?—I had so put it when I prepared the memorandum, but I have had occasion to alter that recently.

1740. In your evidence I think you said 650,000

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tens of rupees?—Yes, or a difference of 290,000 tens of rupees.

1741. Why did you make that alteration?—At the time I drew up this paper, which was a few weeks ago, the average rate of exchange on the whole year had then been 1*s.* $5\frac{5}{32}$*d.*, but the higher rate at which the bills have been sold during the last month or two has made a difference of $\frac{1}{4}$*d.* per rupee on the exchange of the year.

1742. This occurred in a fortnight?—No, I find that the former calculation was made about the 8th of December, so that the improvement has occurred in eight weeks.

1743. A difference of 290,000 tens of rupees?—Yes.

1744. Do you find that the uncertainty caused by the inability to forecast the rate of exchange is a serious hindrance to any policy in India involving an expenditure of money?—Yes, very great.

1745. I think you said that the Government of India is in a peculiar position as regards taxation. Do you mean that, as a foreign Government, it has to exercise special caution in regard to the imposition of taxation?—Yes.

1746. The people of India are very conservative and suspicious in their ways?—Yes.

1747. And fluctuations in taxation in India are specially to be deprecated on this account?—I think so.

1748. Is not the Government of India also in a peculiar position regarding taxation, owing to the fact that it has to consult the wishes of two countries? For example, a form of taxation to which the people of India would not greatly object might be very strongly objected to in this country?—Yes, in the case of the import duties especially.

1749. Are not the finances of India specially liable to be upset by the periodical occurrence of droughts, and by the precarious nature of the opium revenue, which is derived from a tax on a drug consumed by a foreign people, and a drug which that people largely grow in their own country?—Yes.

1750. Does not drought seriously affect the land revenue, which is in many respects of the nature of rent, and does it not from time to time involve the expenditure of large sums in the relief of distress?—Yes, it does.

1751. And is not the state of affairs beyond the north-west frontier a cause of additional expenditure, and is not this a cause which may very likely lead to further expenditure from time to time?—I am afraid so; it certainly is such a cause.

1752. Looking, then, to the position of the Government of India as a foreign Government in India, and to the special and unavoidable causes of uncertainty which affect Indian finance, and to the great objections to change in the amount and form of Indian taxation, is it not specially important to remove any ground of uncertainty in the future which it is practicable to remove?—Yes, it is very desirable that it should be removed.

1753. You have said that the revenue from salt, stamps, excise, provincial rates, customs, and assessed taxes might perhaps be increased in case of absolute necessity?—In case of absolute necessity they might, perhaps.

1754. Are not complaints made at present that the existing rate of duty on salt prevents the poorer classes obtaining for themselves, and especially for their cattle, a sufficient supply of salt, and would not very great objections be raised to any proposal to increase the present duty?—Yes, that is so. In saying that those taxes *might* perhaps be raised, I wish particularly to guard myself against being understood to mean that it was desirable that they should be increased.

1755. With regard to stamps, are you aware that many people consider the duties too high at present, and that an agitation has more than once arisen for the reduction of what are called court fees?—Yes; that applies to about two-thirds of the stamp revenue, I think.

1756. With regard to the excise, is it not the fact that the Government of India has never felt any hesitation about increasing the duties on drugs and spirits, that its policy has avowedly been to raise the maximum of revenue from this source consistent with not encouraging consumption; and is it not possible that any raising of the rate of excise duty might be followed by a decrease rather than an increase of revenue?—I believe that would be the case. There has been a very remarkable falling off in the consumption of excise liquors in some districts in Bombay lately, and it seems probable that there will be a very serious loss to the revenue in that presidency.

1757. And the rates of duty have been largely increased there?—The rates of duty have been gradually, but considerably, increased.

1758. Do not the provincial rates take the form of a cess on income from land?—Yes.

1759. And might not any increase of such cess for general instead of local purposes be fairly held to involve an alteration of the land settlements?—I think it would be open to that complaint, certainly.

1760. In speaking of the customs, I suppose you refer to the duties on imports?—In speaking of the possibility of raising them, I did. I do not take the export duty as being open to increase.

1761. Would there not be practically insuperable difficulties in the way of reimposing the import duties?—I think so.

1762. Is there not at present a duty on the export of rice?—Yes.

1763. And have not claims for its abolition been put forward more than once?—Yes; it has frequently been considered by the Government of India, and it is probably one of the first taxes that they would remove if they could do so.

1764. With regard to the assessed taxes, is not the present rate about 6*d.* in the pound on income?—Yes.

1765. And have not strong objections frequently been taken to this tax in India?—At various times there have been great objections taken.

1766. Have not the objections entertained to the income tax more than once led to its abolition?—Yes, it was abolished by Lord Northbrook, and at an earlier date also.

1767. And do you not think that any alteration of the duty, and especially any attempt to raise it, might provoke another agitation for its removal altogether?—It is very possible.

1768. I believe the Secretary of State issues gold securities, on which interest is payable in gold in London?—Yes.

1769. And the Government of India issues silver securities, the interest on which may be paid at the Bank of England by draft on India?—That is so.

1770. Both these securities, I believe, are dealt with in the London market?—Yes.

1771. Have you got any figures showing the price of these securities in the London market before the divergence in the relative value of gold and silver, and at the present day?—The price of 4 per cent. rupee paper in Calcutta was in 1873 $105\frac{1}{2}$, and last year 98. In London in 1873 the price of the rupee paper was $97\frac{3}{4}$, and last year it varied from 74 to 65.

1772. The gold securities have not fallen so much, have they?—The 4 per cent. sterling stock varied in 1873 from 106 to 101, and in 1886 from 104 to $101\frac{1}{4}$. The fall there was slight, and was due to the exceptional fact that they are liable to be paid off at par in 18 months from this time. In London the price of 4 per cent. rupee paper varied in 1873 between 98 and 93, and in 1886 between 74 and 65.

1773. (*Mr. Courtney.*) That just corresponds to the fall in the exchange?—As nearly as possible. I believe it is valued from day to day.

1774. (*Sir John Lubbock.*) The gold security, however, is not tempting, as it is to be paid off so soon?—I think the 4 per cent. stock is not

tempting, but the 3½ per cent. has ranged in 1886 from 102 to 99, giving a mean of 100½, which is very little under the value of the 4 per cent. stock 13 years ago. The gold credit of the Indian Government has clearly risen, I think.

1775. (*The Chairman.*) That loan at 3½ per cent. is not payable off immediately?—No, not for 44 years.

1776. (*Mr. Barbour.*) It appears that the silver securities have fallen over 25 per cent. as compared with the gold securities?—From the maximum to the minimum is 33 per cent., I think.

1777. Before 1872 the persons who invested money in these securities had no reason to suppose that silver securities would fall more than gold securities?—No, I think not.

1778. And does it not appear to you very undesirable that the securities issued on the credit of the same Government, held by the people of the same empire, and dealt with in the London market, should be subject to such a great divergence in the relative value?—It would certainly be very desirable to avoid it.

1779. Bearing in mind the fact that originally there was no ground for supposing that there would be any considerable divergence in the relative value, do you not think that either the holders of silver securities have been very unlucky, or the holders of gold securities have been very fortunate?—Certainly one way or another a change has taken place.

1780. Are you of opinion that the currency arrangements of an empire in which this change occurs are in a satisfactory state?—No.

1781. I think you said that you do not think that the fall in the relative value of silver has specially stimulated Indian exports?—No, I do not think it has.

1782. Is it not the fact that, speaking roughly, India exports yearly about 85 crores worth of commodities, with which she purchases 55 crores worth of foreign commodities, 8 crores worth of silver, and about 22 crores worth of gold, the gold being partly imported into India, but mainly used to discharge India's gold liabilities?—Including the payments in gold; yes.

1783. That is how the 85 crores of rupees are dealt with?—The figures, I think, are an average import of 4,000,000. of gold and an average payment of 18,000,000. tens of rupees in respect of expenditure in England. That is about the same, 22 millions altogether.

1784. And in so far as India exchanges 55 crores worth of Indian commodities for 55 crores worth of foreign commodities, say wheat for piece goods, can you see how India derives any benefit from an alteration in the relative value of gold and silver?—No, not as regards that portion of the trade.

1785. If the fall in exchange translates the gold price of the wheat which she sells into a larger number of rupees, the very same cause and to the very same extent translates the gold price of the piece goods which she buys into a larger number of rupees, so that the gain exactly balances the loss?—I think so.

1786. And in so far as India purchases gold and silver with the commodities which she exports, the alteration in the relative value of silver and gold merely shows that, as compared with what was formerly the case, India is purchasing her gold relatively dearer and her silver relatively cheaper?—Yes, I think so.

1787. And, as a matter of fact, has not India now to give as much produce for silver as she formerly did, and has she not to give more produce for the gold which she requires?—Yes, that is so.

1788. Do you see any special gain to India in that state of affairs?—No, certainly not.

1789. I propose to ask you a few questions with regard to the system under which stores are supplied from England for the use of the Government of India. If the Government of India requires an article from England, say a steam engine, I believe their custom is to order it through the Secretary of State?—Yes.

1790. And the Secretary of State purchases the steam engine, say for 500*l.*, and sends it to India?—Yes.

1791. And to obtain money to buy the steam engine the Secretary of State offers for sale in London bills payable in India in rupees?—Just so.

1792. And if a merchant wishes to trade with India he purchases these bills by paying sterling in London, and the amount the merchant will offer for the bill will depend on the quantity of Indian produce he can purchase with the resulting rupees in India, and the price in gold for which he can sell that produce in England?—Merchants take those two factors into their calculation.

1793. For example, a merchant will give 500*l.* for 6,000 rupees, if he finds that for 6,000 rupees he can purchase as much wheat in India as when sold in England will give him a sum of money sufficient to pay all incidental expenses, give him a reasonable profit, and replace the 500*l.* originally spent?—Yes, giving him a reasonable profit on his bargain.

1794. Freight and the rate of profit remaining the same, the number of pounds sterling the merchant will give in exchange for rupees depends entirely on the silver price of produce in India, and the gold price of the same produce in England?—Yes, that is a main element of the calculation. There is of course competition for the bills.

1795. But the number of pounds sterling which the merchant will give for rupees determines what is called the rate of exchange?—Yes.

1796. The rate of exchange between England and India depends on the comparative range of prices in the two countries?—The comparative range of prices and the demand for the bills at the time.

1797. I suppose the range of prices guides the demand?—No doubt it does.

1798. In the case I have supposed of India requiring a steam engine, the final result is that England gives a steam engine worth 500*l.*, in exchange for as much wheat as will fetch 500*l.* in the London market?—Yes, after paying the expenses, including the profit.

1799. And do you think that that is what occurs in all cases of trade between England and India?—I should suppose that that is the general rule in all cases. In some cases people do not make a profit even, but speaking generally it is the rule.

1800. Has your attention been called to the evidence given by Mr. Bagehot before the Parliamentary Committee on the Depreciation of Silver in 1876?—Yes.

1801. I wish to read to you what he says on that subject. In answer to Question 1368 he says: "I "think the increase of the export of goods from India "to this country will arise in this way; a merchant "in London who is thinking of importing goods from "the East, looks at the price current in Calcutta, "and he sees the price quoted in rupees. The "merchant in London is in possession of sovereigns "in London, therefore he has two operations; first "he has to buy his rupees in India, next with those "rupees he has to buy the articles which he saw in "the price current. The question of profit and loss "to him is compounded of the result of those two "operations. If therefore he can buy his rupees in "Calcutta on more favourable terms, he will find it to "his interest to go into a speculation which would not "otherwise be profitable. If he can get rupees at "1*s.* 8*d.* instead of 2*s.*, and he can buy his goods in "Calcutta with the same number of rupees, that is so "much extra gain to him. Conversely, the English "exporter of goods to the East will receive payment "in rupees, and he will have to sell those rupees; "and, if he sells them for a less amount of sovereigns, "he will suffer a loss, and that is a discouragement "to exporting from this country to India. The "result of these two operations, of the encouragement "of exports from India to this country, and the dis-

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"couragement of exports from hence to India, neces- "sarily is an increase of the balance which this "country has to pay to India, and consequently a "flow of silver to the East." I wish to ask you if it does not appear to you that Mr. Bagehot omitted to consider that simultaneously with the fall in the rate of exchange there might be a fall in the gold price of Indian commodities?—Yes, I think that was not present to his mind at the time.

1802. That in fact he could not determine the profit on the transaction until he had sold the produce in the English market for gold?—Yes.

1803. And if the gold price of commodities fell simultaneously with the fall in exchange and to the same extent, the gain which the merchant made from getting a larger number of rupees for his gold would be exactly balanced by the less amount of gold he would get for Indian produce in London?—I think he overlooked the fact that it might be so.

1804. Have you, as a matter of fact, noticed that the rate of exchange depends very much on the range of gold prices in the London market?—I think that it goes very much with that.

1805. I think you said that the rate of exchange depends on the comparative range of prices in the Indian and English markets of articles interchanged between the two countries?—Yes.

1806. But in recent years the English gold prices appear to have varied more than the Indian silver prices?—Certainly that has been so.

1807. And is there not a striking correspondence between the range of gold prices of wholesale commodities in England and the fluctuations in the rate of exchange?—Yes, I have noticed that there is.

1808. And do you from your experience in the past draw the conclusion that under present circumstances the rate of exchange between gold and silver will very much depend on the gold price of articles interchanged between the gold and silver countries?—I think so.

1809. You have had experience of the silver standard in India, and the gold standard in England, since 1873; is it your opinion that, in so far as regards the important question of stability of standard, the silver standard has been a better standard than the gold standard during that period?—That is my opinion.

1810. You base that opinion on the fact that Indian prices generally, apart from special fluctuations caused by famine, appear to have kept nearer the same level than gold prices have done?—Yes.

1811. And in so far as silver has been a more stable standard than gold since 1873, are you of opinion that to that extent the Indian manufacturer and the Indian producer and the Indian debtor have had an advantage as compared with the manufacturer, producer, and debtor in England, and all other countries with a gold standard?—I think so. I think that the great progress of industry in India in recent years is to a great extent due to that. Perhaps I may be allowed to put in some tables which I have brought relating to the prices and trade. They have not been prepared by myself, but by the Statistical Reporter in the India office. One set of papers relates to the prices, the other consists of the tables of trade and coinage, &c., which were presented to the Select Committee in 1876, and which have been brought up to date. I do not know whether the Commission have had such returns put before them.

1812. (*Mr. Birch.*) I think it is rather an unfortunate way of putting it to say that, to meet the larger amount of sterling payments, a larger amount of silver rupees have to be sent to England and sold for gold. It is quite true you qualify it by saying that in practice this is effected by the sale in London of bills on India payable in rupees. One could quite understand that circumstances might arise by which it might be literally true, because, unless produce could be shipped from India and could be grown profitably, the Government having contracted loans in this country would absolutely have to send precious metals to pay those debts, and therefore it would be utter ruin to India supposing she had to send silver rupees over to this country, because it would be denuding her of all currency?—In the case you are putting, if she could not send commodities she would have nothing to send.

1813. She could send silver rupees, besides a quantity of gold?—The practical effect is exactly the same. She sends to England the commodities, with which she buys the rupees which the merchant would require to send to India for the produce, and which the Government would then have to send back to this country.

1814. In all questions of exchanges it must be remembered that the exchange is always an element of the merchant's business. He calculates what is his freight, his insurance, and his exchanges, and the basis of everything is the exchange, particularly in India. If he wants to buy a certain article, if he sells his wheat and can get 20 rupees over in India instead of getting 16½ rupees, of course he has got 3½ rupees more, and it assists materially the development of the country?—Yes, but if the 20 rupees do not buy more than the 16½ might before, he does not make a greater profit.

1815. But you have told us he did. More than that, you said the rupee bought more than it formerly did, in India?—But I am speaking of the gold which he can buy.

1816. I am speaking of what he gets in India to buy with, and you say that a rupee can purchase more than it could before; consequently he has 20 rupees to purchase with instead of 16½, as he had before, and he is better off?—He, the individual cultivator, may be, but he is a unit of the people of India, whose gold payments may have been enhanced to a corresponding extent.

1817. You must bear in mind India is not the only country that sends produce to this country. I find that of the 69,000,000 quarters of wheat that came to this country India only contributes 12,000,000, or 17 per cent.; consequently you have to compete with all those countries which send over wheat to this country, and therefore, if you are getting more rupees over there for the sovereign for which you sold your wheat here, it would be beneficial to the people there?—But can you use the rupees in the end for more commodities? I think not.

1818. But you have told us just now that you could?—Only in India.

1819. Well, we are talking of India, and where formerly you could buy 1,000*l.* worth you can now buy 1,250*l.*?—Yes, but then I must give the answer that I gave before. I do not dispute that the individual cultivator may be better off, if he has nothing to pay for but the cotton that he wears and the rice that he eats; but as a country India has not gained any advantage, because her greater number of rupees will not pay more of her gold debts than before.

1820. As a gold debtor India is in exactly the same position as other countries which have contracted debts in England. All these countries come into competition with the corn which comes from India to this country?—I can only say that the fall in the rate of exchange has not benefited the country.

1821. Then you referred to the discontent about taxation. Surely the people of India would feel more inconvenience if the exchange was suddenly to rise. Now you say it is 1*s.* 6*d.* Supposing it was to rise to 1*s.* 10*d.*, all the produce that they hold in this country or send over to this country would lead to a very heavy loss, because you must bear in mind that the merchant does not always trade at a profit?—Yes, I presume that, if some sudden rise from 1*s.* 6*d.* to 1*s.* 10*d.* occurred, certain people would suffer.

1822. Supposing India can now sell her corn in this country only at a small profit, and supposing the price remained as at present and she got less rupees sent back, it would be a bad business for her?—But then

I take it that the gold price for which she could sell her wheat would rise also.

1823. Why should it rise? If there are 69 against 12 why should it rise, why should it vary?—I should enter into the question of bimetallism if I answered that.

1824. We import 69,000,000 cwts. of wheat, of which India only sends 12,000,000?—Yes.

1825. Why should the fact of the exchange varying immediately make that go up in its price?—I think that, if the exchange were to rise to the extent you speak of, it would be because the gold price of commodities had risen.

1826. I do not quite follow what you said in your evidence as to a fall in the exchange giving a momentary stimulus, and a rise a momentary check, to the export trade. A man may hold a large stock of corn in India, and when he sees a variation in exchange he says, "I would rather hold it for a month with "the expectation of the exchange improving." And then, as the time comes when he is obliged either to send his documents to England or pay there, he has to send it forward, and that would cause the effect that you mention without any very marked difference with India or any other country?—I spoke of it as appearing to me, from the figures and diagrams which I have prepared, that the effect quickly passes away. It appeared to me that they showed that there was no real benefit to the people. The first diagram is one of the total value of exports, with a parallel line of the increase of the railway mileage, and a cross line showing the fluctuation of the rupee. It appears to me that the line of increase of exports is in correspondence with the increase of the mileage, and not with the fall in the value of the rupee. For some years after 1878 exchange was fairly steady, and the amount of exports increased by more than one third.

1827. But you have mixed all the exports up. The exports to England are alone affected by the exchange, but not the exports to China and other silver using countries. In silver you will find that the proportion to England is considerably reduced. I was quite surprised to find that India sent such an amount of produce to other countries, not to England?—Perhaps you will allow me to put in this diagram, with the principal articles of produce and the increased quantity and value compared with the fall of the rupee to total exports, and another set of tables which I have prepared of the exports to Europe only. Except in the years 1885 and 1886 I could see no material variation, and even in those years it was only in one or two cases that there was any particular correspondence with the fall in exchange. I do not think it at all depends on it.

1828. (*Mr. Fremantle.*) Have you one for the exports to the United Kingdom only?—I have taken Europe, because a good deal of the trade that formerly came to England and went on to the continent now goes direct to the continent. I have therefore included the whole of the European trade.

1829. (*Sir John Lubbock.*) Could you give us a similar table showing the trade to the gold currency countries and the silver currency countries, because that would be affected by the question?—I will prepare a similar set of tables for the silver currency countries. Practically trade with Europe now may be compared with trade with England in former years.

1830. (*Mr. Fremantle.*) Some of those countries are silver using countries?—Yes, if you can now call any countries in Europe silver-using. I do not think you can.

1831. (*Mr. Birch.*) You talked about the charge for interest having been reduced by 1,679,000*l.* I did not hear exactly what your reply in regard to that was. What did you refer to?—The debt is divided into two portions. The portion which is chargeable to the railway and irrigation revenue account represents the money laid out directly by the State in constructing railways and irrigation works, and the rest of the debt is the ordinary debt, and it is the latter on which the charge for interest has been reduced by 1,679,000*l.* But I explained to the Commission that it must not be supposed that debt has been paid off to that extent. The theory is that, had the Government not constructed its public works, it could have paid off debt. It has had surplus revenue to pay off debt to that extent, and therefore, in dividing the debt into two parts, one due to railways and irrigation works, and the other to other causes, the effect is the same as if the government had paid off ordinary debt and borrowed a like amount for railway and irrigation works.

1832. You say there has been an increase of 634,000*l.* in the payment of interest to railway companies, including the annuities granted on the purchase of lines constructed by them, and interest on the stock issued in exchange for portions of these annuities, and that there has been a decrease in the charge for interest on the ordinary debt of 1,679,000*l.* An increase in the one and a decrease in the other. I suppose that is the way you have of keeping it in your accounts?—The debt chargeable to the railway revenue account is transferred from the one head to the other. The object of what seems a complicated arrangement is that a true account may be given of the financial result of the railways, which you could not get unless you charged against them the interest on their portion of the debt.

1833. You said that less securities come from India to England than formerly. Is that a disadvantage?—What I should like to see would be that the natives interested themselves in the securities and held them. I think that it would be better for India if we could get them to hold the securities.

1834. (*Mr. Barbour.*) Do the securities that go back to India pass into the hands of natives there?—No, I think they are only held for the sake of drawing the interest in India. They may be sold, we do not know. All we know is that people prefer to receive their interest in India rather than in England.

1835. Is it the fact that only a comparatively small proportion of the silver debt in India is held by natives there?—That is so. Only one-fourth I think.

1836. (*Mr. Birch.*) When one hears that the rupee debt is going back to India, the inference from that is that the inhabitants of India are interesting themselves in the debt, and if so, is it not so much the better?—I think it rather is that the exchange banks prefer to hold their securities in that country to a certain extent.

1837. So far as the imports and exports balance themselves, the question of exchange does not matter. The one pays for the other. It is the balance that matters?—Yes.

1838. (*Mr. Chamberlain.*) I understand that you consider that the fall in exchange is a great injury to the Government of India, and the people that it represents, but that it does not materially affect traders with India?—That is my view.

1839. Or producers in India?—I think that perhaps to some extent it is of advantage to the producers as distinguished from the taxpayers. In so far as they are producers, I think they may get an advantage by the greater number of rupees which they receive for their produce, but as taxpayers the tax-paying community, I should say, has to pay more taxes for its gold disbursements, and, taking the country as a whole, I think there is no advantage.

1840. But the producers in India would not receive a greater number of rupees, would they? The purchasing value of the rupee in India having practically remained the same, they would receive, *cæteris paribus*, the same number of rupees for the same amount of produce that they have done?—Quite so.

1841. Therefore if they benefit at all it is only by natural advantages, or the railways, or similar things, which are independent of the fall or fluctuation in exchange?—Yes.

1842. But, as far as your opinion goes, neither the producers in India, nor the purchasers of Indian produce, nor the exporters of European goods to India, nor the Indian purchasers of European imports, are

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materially affected by the fall in exchange?—No, I think not in the long run at all.

1843. Then there is only one other class of people who are affected, and those are the employés in the civil administration; but they are beneficially affected, I think?—They are paid in rupees at the old rate; but in so far as they have to remit their savings to England, or, when they come on furlough, to draw their furlough pay in England, or when they take their pensions, if the pensions are payable in rupees, they are injured by the fall in exchange. If the pensions are payable in sterling, they receive the same sterling amount as before, and therefore I think are benefited.

1844. But the soldiers?—The soldiers are benefited, that is, the British soldiers.

1845. (*Mr. Barbour.*) That does not include the officers?—That does not include the officers; it is only the private soldiers.

1846. (*Chairman.*) You stated to me, I think, that, if the change in the relative value of gold and silver is entirely due to the appreciation of gold, none of the pensioners of the Indian Government were injured, and those who receive in gold are greatly benefited?—I do not think that they are injured, but they think themselves injured; they feel it as an injury.

1847. (*Mr. Barbour.*) Even if gold is appreciated, is it not a fact that many charges and payments depend on custom rather than upon the market value of gold. Consequently they would not gain in that respect?—In India?

1848. No, in England?—Yes, I was going to qualify my reply to the Chairman to that extent; for instance, I may take the very common case of the servant of Government educating his children at home. He has to pay probably the same gold price as before, his salary in India remaining as it was. He has to remit a larger portion of that salary in order to educate his family.

1849. (*Sir T. Farrer.*) That is to say that gold has not appreciated altogether, but in connexion with certain commodities?—Yes, all gold prices have not fallen.

1850. (*Mr. Chamberlain.*) Turning to my previous question, I want to understand whether it is the fact that there is any serious grievance with regard to the employés?—I am in a little difficulty how to answer that, because I think that, in so far as they are drawing silver rates of pension or furlough allowance in this country, they are suffering to the extent of certain charges which have not altered with the gold price.

1851. Yes, but that limits the grievance to a small class, and only with reference to a portion of their ncome?—Yes, it is limited.

1852. It is not a serious grievance, which if it stood alone would demand an extraordinary remedy?—No, I think not.

1853. Therefore we come to this, that in your opinion the one ground for interference is the case of the Government of India?—It is the main ground, I think.

1854. Their grievance, as I understand, applies wholly to the old payments, all ancient contracts. That is to say, to the payment of interest upon sterling loans, to superannuation, and similar charges?—It applies to such, but it would apply also to a contract made to-day for sterling payments.

1855. It applies to the ancient contracts, certainly?—Yes.

1856. Does it apply to a new contract?—It applies to any contract made in gold, I should say.

1857. Suppose the Government of India borrows 100*l.* in gold. Let us assume for convenience that they pay 5 per cent. interest, then they would have to find 6*l.* in tens of rupees in order to pay that 5*l.* interest, but would they not receive 120*l.* in tens of rupees as the capital sum borrowed for the 100*l.* in gold?—You are quite right.

1858. If that is so, the interest, that is to say, the burden upon the people of India is only 5 per cent. upon the sum which they receive?—So long as the exchange has not fallen again.

1859. If there is a further fall that would be an injury, but the mere fact that the exchange now is lower than it was 20 years ago does not increase the burden upon a new loan?—No, a new loan made at the moment is no more onerous at the same rate of interest than it was before the fall, till there is a further fall. I have a table showing the effect of the fall in exchange on the rate of interest on the recent contracts made by the Secretary of State with railway companies. The Southern Mahratta Railway contract was made, I think, in the year 1882 at 4 per cent. The Government instead of receiving 4,000*l.* received 48,000 rupees. That contract was made at 1*s.* 8*d.* It has now to pay 4·44 per cent. on that same amount of capital, owing to the fall in exchange in the last four years from 1*s.* 8*d.* to 1*s.* 6*d.*

1860. Then I gather from what you have said that the total loss to the Government of India could only be ascertained by noticing the fall in exchange since each loan has been contracted?—Yes.

1861. But it is not to be measured by the total difference between the normal rate of exchange which I suppose is 1*s.* 8*d.* and the present rate 1*s.* 5*d.*?—Yes. I do not know what you can say is the normal rate of exchange, but you cannot measure the loss by any particular rate. It must be taken on the rate prevailing when the loan was contracted.

1862. You could only get it by a careful examination of all the details of the loans?—Quite so.

1863. When you say roughly that each 1*d.* of difference in the exchange is equal to 1,000,000*l.*, it would not be safe to take that as the sole factor in calculating the loss to the Government of India?—That has nothing to do with the capital borrowing, but is the addition to the exchange on the total disbursements, and it is on the remittance of about 14,000,000*l.* sterling that a fall of 1*d.* would make a difference of the amount that Mr. Barbour mentioned, 10,000,000 rupees.

1864. Assume that 1*s.* 8*d.* is the normal rate, and that the present rate is 1*s.* 5*d.*, then roughly it might be said that the difference being 3*d.* is equivalent to 3,000,000*l.* a year?—Yes, 3,000,000 tens of rupees.

1865. But that is not the real loss to the Government of India. It has to be reduced upon the recent loans which may have been contracted at a time when the exchange was less than 1*s.* 8*d.*?—I think that that saving was taken into consideration in making the calculation; 10,000,000 was the additional number of rupees that were required for the remittance of the amount then due. If you add to that remittance by raising a fresh loan on which interest is required, it is true that the charge will not be increased in the same ratio, but there will be no gain. The 10,000,000 rupees is the loss on the then existing obligations.

1866. Then you have not estimated, I suppose, what the total gain would have been, assuming that the exchange had never been altered?—The table I put in showing the division between the old and the new contracts would, I think, approximately answer your question. It shows how much additional charge is incurred under former contracts, and how much under the contracts of the last two years, in which fresh loans have been raised.

1867. Then I understand you to agree with Mr. Barbour that the Indian Government had been prevented from carrying out further railways and similar works by this difficulty of the exchange?—Yes.

1868. I do not understand that. Have you any idea of what proportion of the expenditure of a railway is made in India, and what proportion out of India?—I think that before the Select Committee upon Indian Railways the proportion was given as one-third in England, and two-thirds in India.

1869. The expenditure in India is not affected by the exchange at all?—No.

1870. Therefore the only difficulty is with regard to the expenditure in England?—Yes.

1871. And as regards the expenditure in England, India has to find more silver for its gold?—Yes.

1872. But does it not get more goods for the gold in proportion?—Yes, I agree in the questions you are putting to me, but that was not the point.

1873. In that case the same amount of silver will produce the same amount as before of engines and rails. Although more silver has to be given for gold, more silver has not to be given for goods which India actually requires for making a railway?—Yes.

1874. Then how is the Indian Government damnified by the fall in exchange, and prevented from making these railways?—Because it has no surplus revenue to devote to the making of the railways.

1875. It is prevented by this loss of which we have been speaking, say 3,000,000*l.* a year, which practically reduces its available income?—Yes, and of which, as I before mentioned, 1,500,000*l.* was set aside exclusively for such works as these famine railways, or for diminishing the debt caused by constructing public works in India.

1876. If, therefore, that 3,000,000*l.*, the past loss in exchange, could be filled up in any way, there is nothing now which should prevent the Government from carrying forward its public works as fast as it would otherwise have thought desirable?—No; it would be in a very favourable position, owing to the cheapness of the materials.

1877. (*The Chairman.*) Inasmuch as it had to use borrowed money for the purpose?—And also if it constructed lines with borrowed money.

1878. (*Mr. Cohen.*) You have just said that the expenditure of India in the making of railways is not affected as regards that expenditure disbursed in India. Would that be the case if the Indian Government were obliged to borrow? Would it not be the case that they would be piling up obligations in England in sterling, which is a very dangerous thing in the face of the uncertainty of the rupee?—Certainly. My answer to Mr. Chamberlain was given with reference especially to the famine railways constructed from revenue. I was not then speaking of railways constructed from borrowed money.

1879. But in so far as expenditure even in India is supplied by funds borrowed in England the same objection applies as before, that it is an increase of sterling obligations?—

(*Mr. Chamberlain.*) But only if there is a further fall in the exchange? If you could assume that the exchange had reached its lowest, it would not matter as far as borrowed money goes?—No; if you have a stable ratio between gold and silver, it then does not matter.

1880. (*Mr. Cohen.*) Or even without a stable ratio; provided that they arrive at a point at which there is no further fall, then, the capital which you receive now being in proportion, it would not matter; but it is the fear of a further fall which renders the Indian Government timid in piling up their obligations in this country, and therefore prevents them developing their public works in India?—Yes.

1881. (*Mr. Houldsworth.*) If there was a rise, there would be a benefit?—If there was a rise there would be, but the very fact of increasing gold obligations, and consequently the remittance home, tends to prevent a rise.

1882. (*Mr. Cohen.*) You said civil servants have only to complain in respect of a limited portion of their income, and only a limited portion of the servants. Are you giving your opinion or their opinion?—My opinion, certainly. It does not agree with theirs.

1883. They do not accept your view, I think?—No, and I must add that there is a very great appearance of hardship. It is a point that admits of great argument as to how far a silver income does go now in England.

1884. Independently of the question as regards the Government of India, do you think that business has been hampered in the country itself by the uncertainty of the exchange? Within the last four or five years do you think business has been hampered, and people have been afraid to engage in ventures on account of the uncertain value of the rupee?—In regard to the foreign trade, yes.

1885. Have you any idea that the continuous fall in silver has engendered any distrust in the native mind?—I have seen it stated, but I do not know that there is any foundation for it, excepting the tendency of such people to hoard, rather than to invest in Government securities with the risk of their falling in value.

1886. Do you think this fall has increased the tendency to hoard gold, which we have had in evidence?—No, I do not see any such inference to be drawn from the figures. In times of luxury the people will take gold and hoard it; but I think the hoarding in recent years, which has unquestionably taken place, is more due to the prosperous state of the people from good harvests than to any distrust of silver.

1887. The hoarding goes on to a greater extent in gold than silver, or less, do you consider?—I notice that, whenever the people are in a flourishing state and able to take it, they will take gold as a rule. I have a table in which I have endeavoured to calculate what the absorption of gold and silver into India has been, and in the last five years it has been 23,000,000 tens of rupees in each metal, including in the silver the coined silver, a great deal of which is for hoarding. Perhaps I had better put that table in.

1888. You gave some evidence about the divergence in value of Indian securities payable in silver as compared with Indian securities payable in gold?—Yes.

1889. But you must be aware that in any Indian securities payable in gold or silver, *inter se*, there must be considerable divergence in value according as they are more or less current?—Undoubtedly.

1890. The rupee securities have not the advantages at the Bank of England which the sterling securities of the Government of India have in the nature of facilities of transfer, and so forth?—No, they have not.

1891. When you allude to the divergence of price between gold and silver, I think it well to call your attention to the fact that there are other elements besides the respective currency in which the debt stands which may affect the figures which you have put in?—Yes.

1892. Such as their marketability, and the mode of transfer, and so on?—That, undoubtedly, is the case; but in those respects there has been no alteration in recent years. The point with reference to which I put in that table was to show that the gold securities, whatever they are affected by, are not affected by the fall of exchange, while the silver securities are.

1893. Are you aware of any means by which the Indian Government could stimulate the desire of the people of India to invest in Indian securities? Could not that be done through increased postal facilities?—That point is continually before us at the India office, and in the Post Office savings banks considerable amounts are now invested. I do not know that anything more can be done, except to leave it to the progress of time for the people to learn to do so.

1894. Independently of all questions of currency and the consequent possibility of increased loss to the Indian Government, do they not consider it undesirable as being a foreign country to borrow so much money in England. If this question of currency were removed, that question would exist still?—No doubt it would. Unless the comparative cheapness of borrowing in England is a sufficient set-off against the objections, it is desirable that the debt should be as much as possible a native debt and not a foreign debt.

1895. But, holding out the idea that, if this currency difficulty were removed, you could develope public works, it would not be well to ignore the question that there must be a limit to the foreign debt that a country can pile up abroad?—Certainly, I am no advocate for adding to the foreign debt more than is necessary.

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1896. Have you any idea whether the natives in India would accustom themselves to a gold currency?—There is little or no gold now current there, and I cannot think that it is at all suitable for the wants of the people.

The witness withdrew.

Adjourned till Tuesday, February 8th.

Ninth Day.

Tuesday, 8th February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P.

MR. GEO. H. MURRAY, *Secretary*.

Mr. JOHN KENWORTHY BYTHELL examined.

Mr. J. K. Bythell.

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1897. (*The Chairman.*) You are a Manchester merchant, are you not, engaged largely in the Eastern trade?—Yes. Our head office is in Manchester, and our head office in India is in Bombay, and we have also a dozen branches up country, under the control of our Bombay house for cotton buying.

1898. Will you explain the general character of the business you carry on?—Our business is principally exporting cotton to the continent of Europe and to England. A large portion of the Indian crop is used on the continent of Europe; but we also do some business in shipping Manchester goods to India, although not so much as formerly.

1899. You export raw cotton from India to Europe, and you import into India, from Manchester, manufactured cotton goods?—Yes; but cotton exporting is our principal business.

1900. Could you describe the financial machinery by which that trade is carried on?—The export trade is mainly financed by the exporters selling bills in India to what we call the Exchange Banks, banks who lay down rupees in India by buying Council drafts or merchants' bills in London, or buying silver, as the case may be. We sell our bills in India to them drawn in sterling, payable in England, or in francs payable in Paris, and we get rupees for them in India.

1901. And with those rupees you pay the grower?—We pay for the cotton. That is the way the export is principally financed.

1902. Now, how is the import trade carried on?—I should say first of all, with regard to the export trade, that there are a few merchants who buy the Secretary of State's drafts in India, but only to a very limited extent. I fancy it will be found that nearly all those drafts are bought by the banks, and with the money which is laid down the banks buy the exporters' bills in India. The import trade is principally financed either by the exporters of goods from England selling bills in London drawn in rupees, for which they receive sterling at an exchange fixed at the time of sale, or by their buying bills in India from the banks, giving their rupees there and getting bills payable in London in sterling. Certain Eastern bank managers have told me that the proportion drawn from London is increasing largely.

1903. Are any of these transactions long dated transactions of the kind that would be influenced or modified by an alteration in exchange between the time they were entered into and the time that they were finally completed?—Well, nearly all the business now, either exporting produce from India, or Manchester goods at any rate to India, is on the principle of simultaneous operations.

1904. Is that what are called telegraphic transfers?—No, I mean the business transactions, the sales of produce or goods. A man makes an offer or he gets an offer for a certain amount of produce or for goods, and he tries to close the transaction as nearly as possible simultaneously. For example, an exporter of produce from India may sell a cargo or a certain fixed quantity to be shipped, say two, three, four, or five months ahead. Simultaneously he generally contracts in India for the produce in rupees, he sells his bill to the bank, fixes the exchange bill to be delivered when the produce is shipped, and he engages his freight. You see there are three operations necessary in order to fix the sterling price, and he tries to fix the whole three, the price in rupees, the rate of exchange, and the rate of freight, for a small margin simultaneously.

1905. This is rather a complicated matter for people not familiar with the details of business. I think it would put it in a very clear light before us if we were to take a concrete example, say your firm buying a certain number of cotton bales in India, and going through the stages of the operations you would undertake in order to bring that home to England, and get your profit out of it. Could you do that off hand?—Oh, yes, at once, but I should like just to impress upon the Commission first of all that nearly all of the business now, since telegraphic communication was so perfect, is done simultaneously. There is very little produce shipped, I believe, from India for sale, on what you might call speculation, as merchants' speculation, and there are very few Manchester goods, I think, shipped to India in that way. Business is nearly all done either in execution of offers made, or through the exporter making offers in the currency of the country in which he sells. For instance, if we sell 1,000 bales of cotton to a man in England that will be at so much per pound delivered in England. Well, we do not sell that unless at the time we can contract for the cotton in India at a price fixed in rupees, sell our bills on England at an exchange which the bank for the time being will then fix for bills to be delivered when the produce is ready, and engage our freight, so that if we can close those three operations in India of course we have fixed our price in sterling, and if we get the price fixed per pound simultaneously from our buyer in Europe our transaction is closed, provided all parties to the contract fulfil it,—provided we have no failure.

1906. In other words, you so conduct your business operations that if all the contracts entered into are fulfilled, your profit is certain from the beginning. There is no margin of doubt or speculation in it?—Well, a great deal of the business is done in that way.

We do it as far as we can, of course, but practically most people in the produce trade are always buying in India and trying to sell simultaneously as far as possible, so as to have as little stock in their hands as possible.

1907. Does not that simply transfer from your shoulders to those of the buyer in England the possibility of speculative loss or gain?—Well, that forward principle runs through the whole business now. For instance, I believe that in most cases if a spinner buys cotton from us, he sells his yarn simultaneously for forward delivery, and I believe in most cases if a manufacturer buys his yarn he sells his cloth, and I believe that simultaneously also the buyer of the cloth sells it in India or China, as the case may be, at a price fixed, and he fixes the exchange in that transaction also. The business of the world is done more and more every day in that manner of the eventual buyer of the manufactured article taking the risk, and he may possibly sell it to small customers in the same way.

1908. But still, as a considerable time must necessarily elapse between the commencement of the transaction, namely, your buying the raw cotton from the Indian grower and the final process by which that is sold as manufactured Manchester goods in the Eastern market, and as during that time there may be great alteration in exchanges and the relative value of gold and silver, on somebody or other, however far you may try to put it off, must fall the speculative possibility of loss or gain. Is that not so?—I do not think so, because the banks who buy the one class of bill and sell the other put one transaction against the other and keep themselves covered from day to day as nearly as possible, I believe. For instance, I believe if some bank manager here who had branches in the East had telegrams to-day that his managers at his branches had bought bills for forward delivery against produce to a very large extent, he would practically cover himself almost immediately in some shape or form here. He would either buy Council drafts from Government or he would buy silver, or he would buy from day to day bills drawn from here against shipments to India.

1909. (*Mr. Birch.*) That is, the base of the whole is on a fixed exchange?—On a fixed exchange. Of course I am only inferring what Eastern bankers' business is. I believe you would find that the exchange banks with their head offices in London and their branches in the East scarcely speculate at all. They put the imports against the exports; and the silver and the Government Council drafts, bills drawn by the Secretary of State for India, virtually finance the balance.

1910. (*The Chairman.*) And practically you are of opinion that however long a transaction may be before it reaches completion no drop, however sudden, in the exchange can really impose either loss or gain upon any of the parties concerned?—On those closed transactions I believe that if any party runs any risk he does it as a speculation. He does not need to do it.

1911. No body need do it?—He need not run any risk. Of course there is some shipping of produce for a rise because a merchant thinks well of it, and I dare say there is some shipment of Manchester goods to the East in which people deliberately take the risk, but the great bulk of the shipments homewards and outwards are closed transactions, and if a man chooses to speculate in exchange, rupee prices, or the freight, he does so because he prefers it, not because he need do it.

1912. Then the Indian Government really are the only debtors who appear to suffer by the oscillations in the exchange? They are the only people who are unable to guard themselves?—They and the holders of silver have to take that risk between them, I think.

1913. I suppose that you might divide, for the purposes of argument, the causes which may affect trade in consequence of the oscillation in the relative value of gold and silver, firstly, into those which result from the uncertainty in the exchanges which you have already disposed of, and, secondly, those which result from the fact that silver is permanently cheaper or largely cheaper than gold. Those would be the two principal ones. You are of opinion, at all events, that the mere oscillation in the exchange produces no inconvenience?—Practically very little. There is some inconvenience, of course. If you have a rapid rise or fall it puts a stop to business temporarily, until, of course, there is some adjustment of prices to make up for the difference. Now, perhaps, I might give you a case in point in this last great rise to show what I mean. You know that last year there was a fall which culminated in August. The rupee went down about 2*d.* roughly speaking, from 1*s.* 6*d.* to 1*s.* 4*d.* Well, produce in India rose 12 or 13 per cent. in price, as the price of silver fell, because all we exporters who were willing to work for a small margin were prepared, so long as we could get the same sterling price, to pay more rupees. After August we had, of course, a rapid rise in exchange, and then we were in this position. As the exchange in a very short time rose 12 per cent., we had either to get more money here for our produce or we had to pay fewer rupees for it there, the rates of freight having practically remained with very little fluctuation. Well, the practical result of that rise is that the sellers of cotton in India have had to give way 12 per cent., or nearly so, in their prices, because we have not had a very large fluctuation in the prices of cotton measured in gold. In some cases they have not only had to give way to the full extent of the 12 or 14 per cent. rise in exchange to compensate for that rise, but, through other influences, they have had to give way very much in prices besides. For instance, what we call Bengal cotton, cotton grown in Central and Northern India, happens to be an exceptionally large crop this year, and as the consumption of that short staple of cotton is to a certain extent limited in Europe, and very large quantities of it have been offered for sale for shipment during any month the buyer chose to name, almost, the price of that cotton has gone down something like $\frac{1}{2}d.$ to $\frac{5}{8}d.$ per pound in Europe.

1914. What per-centage would that be roughly?—About 16 per cent. in the gold price, and 12 or 14 per cent. in the rupee price besides, to make up for the exchange. There is an instance of how things have had to adjust themselves. Sellers of that produce have not only had to take a lower price, lower by 12 or 15 or 16 per cent., consequent on the fall in value of that cotton in Europe in consequence of the increased supply, but have had to take 12 or 14 per cent. less on the European price to compensate for exchange.

1915. (*Mr. Chamberlain.*) But, as I understand, the price of the produce had gone up previously to August?—In India it had, in rupees. Since then the sterling price has fallen.

1915*a*. Therefore on both occasions there was almost an immediate readjustment?—An immediate readjustment of price in rupees to compensate for the fall or the rise in exchange.

1916. (*The Chairman.*) An alteration in the price of cotton you have just described to us is due to two causes; one of them is the familiar one of supply and demand, which we may neglect, and the other is the exchange. What I want to know is whether the rapid alteration in the value of cotton in India, due to the exchange, is or is not pernicious to the trade? It rose rapidly before August in consequence of one alteration in the exchange, it fell rapidly after August in consequence of another alteration in the exchange. Is not that a great inconvenience to the grower in India, and the exporter from India?—Well, of course, to the grower fluctuations are to that extent unpleasant. To the exporter it practically makes no difference. We have only to wait a little till prices adjust themselves. When we are out of season prices do not adjust themselves so quickly. The supplies are so small that

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holders hold on to their cotton, and adjustment takes a long time. In the season these fluctuations in exchange are adjusted in the rupee price very quickly indeed.

1917. (*Mr. Birch.*) They vary with the demand?—They vary with the demand. As soon as the exporters find that they cannot pay the rupee price without losing money, they stop buying and the prices adjust themselves.

1918. (*The Chairman.*) You simply work the machine by which the cotton is transferred from the grower in India to the buyer in England?—Certainly.

1919. You have just explained that the machine is practically so perfect that you receive no violent shock from even the most violent oscillations in exchange. What I want to know is whether these violent oscillations in exchange do not do harm to the grower, to the man who is not part of the mere machinery of transfer, but the man who actually produces the goods?—Well, of course, if the price of silver rises rapidly the grower does not like it. If we have a fall in silver, and we are able to offer him 10 or 15 per cent. more for his produce, he likes it very much.

1920. (*Mr. Courtney.*) Do you deal direct with the grower?—In some of the districts. We have now 12 branch buying establishments (in the Deccan, in Guzerat and Kattiawar, and Tuticorin), and we get as nearly as possible to the grower on the one side and the consumer on the other, because it is the only way in these telegraphic days in which a middle man can make a margin.

1921. (*The Chairman.*) You have no opinion yourself as to the effect upon the grower of the uncertainty which he must have as to what his produce will sell for after he has grown it?—Well, those very rapid fluctuations are, of course, not of frequent occurrence. We have had one or two years perhaps in which we have had these rapid changes of 12 or 15 per cent., but, as a rule, the falls and rises are not so great, and although the grower does not like a rise in exchange because he does not like to have to take a lower price for his produce, still, on the whole, as the tendency has been downwards, I am distinctly of opinion that the fall of silver has benefited the grower in India and improved his position immensely.

1922. (*Mr. Birch.*) But the fluctuations might be produced by other reasons as well as exchange. A very large importation here of wheat and other articles would affect him just the same?—The gold prices I hold are mainly a question of supply and demand, and of course fluctuations in these prices he feels incidentally just as we feel them here, because we who have to sell in gold offer more or less according to the price we can get here. The whole thing is worked by telegram, and the most minute fluctuations are telegraphed, and we act accordingly.

1923. (*Mr. Fremantle.*) And, therefore, with all the parties concerned it is more a question of calculation than a question of loss?—A question simply of calculation.

1924. (*The Chairman.*) The people to whom it is a question of calculation are the people who work the machinery of exchange. I take it that the grower of cotton can make no calculation?—No, he does not calculate any more than the grower of wheat here calculates what the price will be in the autumn when his crop is planted, unless he chooses to sell for forward delivery.

1925. (*Mr. Birch.*) He has nothing to do with exchange?—Nothing at all.

1926. (*The Chairman.*) But he suffers severely if the exchange reduces the price of his produce after it is grown?—He does, but as the tendency of the exchange is downwards he has been getting better prices relatively to gold during the last 12 or 15 years than he did before. As the fall in silver of late years has been so rapid he has received somewhat better prices on the average.

1927. Then the manufacturer in England, does he suffer from these oscillations due to the fluctuations in exchange?—Well there of course you have the exact reverse operation. If the exchange falls as it did in summer, prior to the month of August, then, of course, the exporters of Manchester goods have practically to stop operations, until they can adjust prices, and the adjustment last summer was practically a rise in this special instance in rupee prices rather than a fall in sterling prices. I think, speaking off-hand, although I do not do the buying of our own grey goods in Manchester, that the prices of unmanufactured goods, during the four or five months when exchange fell 12 or 15 per cent., remained pretty steady in Manchester, and from that, of course, it is clear that as business went on more largely than ever, either all or the bulk of the fall in silver was compensated for by an advance in rupee prices in India.

1928. It is in your power, directly you see that operations are not going to yield a profit, to stop operations?—Certainly.

1929. It is not in the power, of the grower on the one hand or the manufacturer on the other to alter his proceedings according as prices rise and fall. Does not that produce considerable friction and loss to the trade?—Well, of course, a manufacturer does not stop working, but I believe I am correct in saying that the great bulk of the manufacturers in Lancashire now sell goods for forward delivery just as we sell our cotton for forward delivery. Our cotton is sold to them, and for the time being covers them against sales that they make of their yarns or goods, and as a general rule, at any rate of late years, unless there has been a long cessation of demand, manufacturers do not work for stock in Lancashire, I think.

1930. Well, then, I may take it that you do not consider the uncertainty of exchange any evil at all to those who, like yourself, work the machinery of exchange, and only an insignificant evil to the grower and the manufacturer?—Of course, it does render the business more difficult, but I do not look upon it as any great evil myself.

1931. It is an evil, but not a great evil?—A very small evil, a thing that can be very easily got over.

1932. Have you any doubt, leaving the question of the uncertainty of the exchange, as to the effect which has been produced on the export trade of India by an apparently permanent fall in the relative value of silver and gold?—Well, I entirely disagree with the views taken in Mr. O'Conor's minute, in which he argues that the fall in silver or the fall in exchange, put it which way you like, has practically done nothing to stimulate the export trade of India.

1933. You are of opinion, then, that it has done something to stimulate the export trade of India?—I believe that the greater portion of the drop in the gold prices of produce is owing to increased production, opening of new sources of supply, reduced cost of transit by land and sea, the opening of the Suez Canal, and reduced cost of handling generally, and the abolition of so many middle men, and the very cheap work done in consequence of telegraphic communication by the remaining middle men. I believe all these causes have had a very great influence also in developing India's export trade, but at the same time I do hold very strongly indeed that the fall in silver, and the consequent fall in exchange, has been a very great benefit to the Indian producer, and has largely helped to develop the export trade.

1934. Is it the process of fall, or the difference between the value after the fall, which has produced this good effect?—I think that what you might call the permanent fact that more rupees as compared with gold are paid for the produce helps to develop the trade.

1935. It is not the downward course of the exchange that has done the good, but the effect of the fall?—The fall as a whole.

1936. And as a permanent factor in trade?—Yes.

1937. Then do you think that is a permanent benefit to the Indian producer? Do you think that the fact that silver is worth roughly speaking 1*s.* 6*d.*, instead of roughly speaking 2*s.*, is a benefit to all

time for the Indian producer?—Well, of course in time, as prices adjust themselves to the lower value of the rupee, the benefit might not be so great, but I think, taking it as a general rule, that a plentiful currency is of advantage to a country.

1938. Perhaps it would be convenient to the Commission if you were to explain exactly the mode in which you think the Indian producer has been benefited by this permanent fall in the value of silver?—Mr. O'Conor, I think, puts it down—I take his calculations because, no doubt, he has made them very carefully—that the prices in gold have, since the date he gives, which, I think, is 1873, fallen roughly 30 per cent.

1939. In England?—The gold value, say of Indian produce, has fallen 30 per cent., whereas the silver value has only fallen 10 per cent., the other 20 per cent. being a difference in exchange, and the fact, of course, that the fall to the ryot has been lessened to the extent of 20 per cent, has, so far, been of very great advantage to him, and has saved the country from great depression of trade.

1940. Would you explain in detail how that fact benefits the ryot?—Well, he gets prices for his produce which are 20 per cent. better than he would have had if silver had not fallen while the gold values had fallen.

1941. He does not get a better price in silver than he did before?—The prices of silver in India for articles not exported have not altered materially. We may assume that they have remained the same. The prices of export articles have altered. The fall is about 10 per cent., I may say, whereas they would have fallen probably 30 per cent. presuming that the silver value of gold had remained stationary, while the gold price of commodities had fallen 30 per cent.

1942. If we confine ourselves for the moment to the price that the ryot gets in silver in India, so far from benefiting by recent changes in value he loses by 10 per cent.?—Always providing that commodities would not have fallen in the gold value if silver had not fallen, but I believe that commodities, as compared with the gold value, would have fallen if silver had not fallen. I do not believe that the great bulk of the fall is due to appreciation of gold. I believe it has something to do with it; but I believe that the greatly increased production of many articles, especially by America and India, the immense expansion of railways in those countries, the cheapening of all transit both by land and sea enormously, and the very cheap working by all middle men, the abolition of so many middle men, and the fact that the telegraph dispenses with stocks to a greater extent than formerly—I believe all these causes would have brought about a fall in the value of commodities measured in gold even if you had not had this change in the value of silver.

1943. I quite understand your view, but I want to get out exactly the benefit which you think accrues to the ryot from the fall in the value of silver compared with gold. Confining our attention to the ryot and the price that he gets in silver in India, your view is that he gets 10 per cent. less than he used to get, but, if it had not been for the fall in exchange, he would have got 30 per cent. less?—I won't say 30, but a good deal less. I do not think the appreciation of gold has caused 30 per cent. fall in the value of commodities.

1944. So that it would not be true to say that the ryot has been benefited. He has been saved from a loss; he is not better off than he was, but he is not so badly off as he would have been?—He has been saved from a loss certainly—that is perhaps the best way of putting it. Perhaps you would just allow me to say, with reference to this, that I have a statement showing what the increase in supply of several articles is as between 1873 and 1885, the periods dealt with by Mr. O'Conor. I see that in wheat the increase in supply has been 22 per cent.

1945. (*Mr. Barbour.*) Is that from India?—No, the increased production of the world so far as ascertained, the available production I suppose it must be. It is from the Statistical Society's Journal, Mr. Sauerbeck's statement:—Sugar 68 per cent., tea 44 per cent., iron 39 per cent., copper 97 per cent., cotton 32 per cent., and wool 20 per cent. I think we might take it as an established fact that if you increase immensely the supply of articles by opening up new fields of cultivation or new mines, as the case may be, the price, as measured in gold, must as a matter of course fall immensely also, and the fact that silver fell at the same time saved the ryot in India from a great deal of loss with respect to the produce which he cultivates for export.

1946. (*The Chairman.*) Then your view with regard to gold is that it has appreciated relatively to the number of transactions of which it is the medium?—Yes; but the articles which have fallen so much are just the articles which have been produced in what almost looks like, for the time being, excess of quantity.

1947. I want to get at the root of this matter of the benefit to the Indian producer. He gets 10 per cent. less in silver. Does that complete the transaction so far as he is concerned, or is the export stimulated, are more people desiring to buy his produce than formerly? I want to know how it is exactly that you think that the Indian export trade has been stimulated by this permanent fall in the relative value of gold and silver?—By the fact that the fall in silver makes the price 20 per cent. better to him than if silver had not fallen. Rupees are to a great extent as valuable to him as ever, and as the fall in silver enables exporters to offer him a much higher price I think it stimulates production for export.

1948. (*Mr. Chamberlain.*) As I understand, the producer in silver using countries has benefited to the extent of 20 per cent., whereas gold using countries have lost that?—Yes, that the fall of silver has saved him from 20 per cent. of the fall which is felt by countries which use gold currencies solely.

1949. (*Mr. Birch.*) That is to say, that he would get fewer rupees than he gets now?—If silver had not fallen he would be getting 20 per cent. fewer rupees always, presuming that the gold prices had fallen as much as they have done in the meantime.

1950. (*The Chairman.*) The best way to put it is that the producers of the world have suffered heavily in countries which use gold from the fact that their currency has appreciated. Those countries which are fortunate enough to use silver, and whose currency has not appreciated, have not suffered?—The great saving in the cost of transit, and the fact that the middle men absorb so much less of the production have had a great deal to do with the fall in prices. I think that the appreciation of gold is only one factor. I think that the immense saving in the cost of transit is another. I have one or two figures which I will give you afterwards to show what the immense saving is. I think that has had a great deal to do with prices as well as the appreciation of gold.

1951. The only cause that we are concerned with at the present time is the appreciation or depreciation of the precious metals. What I want to get at is your view of what has occurred to the producer in consequence of that appreciation; and, as far as I understand you, the producer in gold using countries suffers heavily, through the fact that the currency in which he deals has appreciated 30 per cent. The producer in silver using countries has not suffered more than 10 per cent., because the currency which he uses has only appreciated 10 per cent?—Yes.

1952. Then, is your view that there is an immense advantage to the consumer in the gold using countries through the improvement of machinery of transit, and other analogous causes?—Yes, to the consumer and to the producer. I suppose the argument is that the consumer virtually settles the price, but of course it must be a great advantage to the producers also if the cost of transit and the charge of the middle men are immensely reduced, as they have been.

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1953. Has the Indian consumer gained his full share of that?—I consider that the consumer in all countries has gained it. I suppose it is divided between the consumer and the producer. The manufactured goods or produce, as the case may be, are now transferred from country to country by one middle man, where you had half a dozen employed before, and that one middle man works more cheaply than ever he did before, and the cost of transit is reduced by an enormous proportion. On cheap goods like wheat, iron, and things of that sort, the per-centage of reduction on the cost of transit is enormous.

1954. Has the Indian producer got more than his fair share of that, owing to the relative value of gold and silver?—He has been relatively better off, through having a depreciated currency.

1955. (*Mr. Birch.*) A depreciated currency, but not depreciated there?—Not depreciated there.

1956. (*Mr. Fremantle.*) And through facilities for getting his goods to the market?—Yes.

1957. (*The Chairman.*) We are all agreed that the wealth of the world has been increased by these improvements in the machinery, but I understand your view to be that besides that general gain to the whole world the Indian producer has gained relatively to all other producers, owing to the fact that he lived in a country in which the currency had not depreciated more than 10 per cent.?—Yes, I think that has been a distinct advantage to him, as compared with the producers in gold using countries.

1958. And how long do you think that it is likely to go on? Indefinitely?—Of course that is a very difficult question. The process of adjustment has been so long hitherto that one would be inclined to think that it would take a very long time.

1959. The way in which the producer has been benefited, as I understand it, is by the increased demand for his goods, in other words, the export trade of India has been stimulated?—It has been stimulated.

1960. That would increase the money debt of other countries to India?—Yes.

1961. And that is a process that must go on indefinitely; the money debt of other countries to India must go on increasing?—Yes.

1962. Would not that result in a rapid flow of bullion from those other countries to India?—Of course it will result in an increased flow of bullion, only as you know there is an increasing amount of the balances to be adjusted by these Government of India remittances to England.

1963. But still there ought to be an accumulating debt from other countries to India if there is to be this permanent bonus to the Indian exporter?—Only up to the present time India has taken a great portion of that accumulating debt in railway plant and in borrowing money in Europe to develop her resources.

1964. But, looking at the thing broadly, is it not the case that any premium upon the export industry of a country must increase and rapidly increase the debts in bullion which other countries owe it?—Yes, certainly it must do.

1965. And what effect would that ultimately have?—That would increase prices in the exporting country. I admit that the tendency, of course, must be for the value of all commodities, wages, and everything else in India to adjust itself to the change in the value of the rupee, but the process is very slow, and in the meantime I think India is deriving great benefit from the stimulus which this fall in the exchange is giving to her exports.

1966. (*Mr. Houldsworth.*) Would you anticipate a reverse effect if silver rose?—I think if anything were done to bring silver up again to the old price, 15½ to 1, it would injure India immensely for a long time to come, check her export trade, and cause great depression there.

1967. (*The Chairman.*) Do you think that the present price of silver, 1*s.* 6*d.*, will have a permanent influence on the Indian exporter for an indefinite period?—I would not like to fix the period, but certainly it will for a long period.

1968. But for a period, the end of which we need not contemplate?—Yes, I think so.

1969. And you also think that the result of the export trade of a country being stimulated is to promote the flow of bullion into that country?—That is so, but only to a moderate extent. I think it will also stimulate the flow of manufactures, that as India gets so many rupees for her produce, and the people become better off, she will be a better buyer for her manufacturers, and that view of the case is borne out by the fact that last year with the lower exchange India has been taking more of our cotton manufactures than ever. As a matter of fact, during the last year as compared with the previous three or four years the increase in imports has been remarkably great.

1970. (*Mr. Birch.*) Like every other country she would only receive the balance in metal?—The balance in metal, but she is taking an increased balance in goods at the present time.

1971. (*The Chairman.*) Then a fall in exchange does not increase exports alone but imports also?—Yes.

1972. What is the limit to this advantage which India is to enjoy? If the rupee could be reduced by artificial means to 1*s.*, what would be the result?—It is very difficult, of course, to follow that out, and personally I do not believe the rupee will go to 1*s.* I think America will take action to prevent anything of the kind. She is the producer of silver, and the agricultural interest of America is very strongly impressed with the belief that the fall in silver is helping exports from the East in opposition to her agricultural exports, and I do not think, myself, we shall see any great further drop in silver.

1973. But if your process were carried to its logical conclusion, and the rupee sank to a purely nominal value, then the imports and exports of India would, for an indefinite period, be artificially stimulated?—Oh yes, I quite agree with you that if it is pushed to its logical conclusion in that way it would be so, and therefore there is that weakness in the argument. Still, at the same time, I do feel, from what I have seen myself and my own experience of the country, that the fall of 20 per cent. in the silver has been an immense advantage to the country, and I should be very sorry to see anything done to resuscitate silver to that extent.

1974. Still, you are not confident yourself of the particular explanation which you give of the benefit which India derives?—I am confident of the benefit which she has derived, but I cannot off-hand, as it were, work out what the exact position would be if we did push the thing to the conclusion referred to, and suppose silver went down to nothing.

1975. (*Mr. Birch.*) Would not the effect of a very large fall in silver lead to the closing of poorer mines, and therefore would not the fall be arrested?—Yes, I was going to follow up with some remarks of that kind as to the effect of the fall of silver, but Mr. Balfour said that was not his argument. He said, supposing we did go on and silver went to nothing.

1976. Supposing silver and the rupee kept the same value, would not the effect be that they would continue to get more rupees?—Yes.

1977. That would be the result, only, if it went from 1*s.* 6*d.* to 1*s.*, they would get more rupees than they get now?—Yes.

1978. (*Mr. Fremantle.*) But, as a matter of fact, there must be a point at which the fall of silver must be arrested?—That is my own belief. I believe we are not to see a much further fall, and when we fell to 1*s.* 4*d.* in the summer—I am not much engaged in the exporting trade from Manchester myself, but men who are in that trade were continually asking my opinion and I gave it very strongly that we should have a very rapid reaction, for the reason I have stated and others which I need not refer to.

1979. (*The Chairman.*) I was not suggesting that silver was going to fall; I was only pointing out that, if your argument was sound, the nearer silver did approach to nothing the greater would be the benefit

to the Indian exporter and importer. As that seemed to be an extravagant conclusion I thought there must be some flaw in the logical process by which it was arrived at ?—There is. As a general rule protection produces prosperity for the time being. It may bring other evils in its train, but while I am not able for the moment to work out that theory, I still feel myself, as I have already said, that we shall not see a very much further fall in silver, and that any attempt to bring silver up to the old ratio of 15½ to 1 would be a great injury to India.

1980. I think you expressed the opinion just now that a plentiful currency was an advantage to a country ?—I think there is no doubt about it.

1981. And, therefore, the world which has been using gold has suffered from the fact that its currency has appreciated by about 30 per cent.?—Well, of course, when you talk of the appreciation of the currency by 30 per cent., that further question comes in of whether the cheaper production has not had more to do with the fall in prices than the scarcity. I think it has. The stock of gold in the world is not used up as cotton, wheat, and produce are. There is an accumulating stock, and I am not convinced in my own mind yet, from anything I have read or seen, that the stock of gold and the production of gold together are so small as to cause a fall of 30 per cent. I think a greater portion of the fall has been caused by the causes to which I have referred.

1982. And you think that that makes a material difference in the conclusions that we should draw from the fall of gold ?—I think so.

1983. The fact that a currency is appreciated through the increase of commodities ?—Not only the increase, but the fact that produce is carried about more cheaply, and produced more cheaply, and that a very much smaller proportion of the price is retained by carriers and middle men. That is one way of putting it.

1984. But if those advantages could have been attained without prices falling—in other words, if there had been gold discoveries at the same time which would have kept up the price of commodities, in spite of the causes to which you have called attention—that would have been a still better state of things for the world, I suppose ?—Well, that is a point on which I have myself some difficulty in making up my mind. There is no doubt of the fact that to the great bulk of the workpeople the fall in the value of commodities seems so far to have been a very good thing.

1985. But if that is so in England it would be also so in India, and India would have been better off than she is now if her rupee circulation had fallen 30 per cent. instead of only 10 per cent ?—Well, of course the value of the rupee for internal purposes has not changed very much, she is merely getting so much more for her exports.

1986. But the same rule applies to India as to England. If it is a benefit to England to have an appreciated currency, it must be equally a benefit to India to have an appreciated currency ?—Yes, I think I might say so. Just at the moment I do not feel that my idea is very clear on the complicated question as regards our own English currency. Still, as a general rule, I wish to say that I do think that an increased production of gold would give a certain measure of increased prosperity to the gold using countries.

1987. (*Mr. Barbour.*) You do not think that a 30 per cent. fall in prices in England can be a good thing, and that it is also a good thing for India to have been saved 20 per cent. of that fall ?—Not to all producers in England; here of course a fall is not a good thing. Of course I should like, before I am cross-examined on a point like this, to work out where the exact loss falls. In England the circumstances are quite different from India, and just at the moment I do not feel myself competent to go into the question.

1988. (*Mr. Chamberlain.*) Is not this an element, that the advantage to India arises from the fact that prices have not fallen on the goods that are for export ?—Precisely; that is what I say. Articles for consumption are much the same. It is chiefly in the articles for export that India has the advantage.

1989. That may be an advantage to India, although for a country generally a general appreciation of the currency would not be a good thing ?—Yes, I agree with that.

1990. (*The Chairman.*) You are aware of the financial difficulties which the Government of India allege that they suffer from ?—Before I go into that would you allow me just to draw attention to one or two things in the paper of Mr. O'Conor. I suppose it will be before the Commission. I will make no general reference to it, but I might just refer to one or two statements. He makes a great point of one or two things there to which I have referred.

1991. Are you of the opinion that the fact of the export trade of India having remained almost stationary during the three years 1883–4, 1884–5, and 1885–6, although there was a very heavy fall in exchange during that period, proves that falling exchange does not stimulate exports ?—First of all, sir, I should like to say that the trade has only remained stationary in values. As prices fell during those years, quantities, of course, must have increased on the average, or the declared values of the exports would have decreased. And I should wish to draw attention to one thing particularly, and that is this. Mr. O'Conor makes a great point in that minute of cotton having fallen off in quantity about 15 per cent. in 1884–5 and 17 per cent. in 1885–6, during which years we had a fall in exchange. Now I wish to draw the special attention of the Commission to the fact that that falling off was owing to the crop sown in the autumn of 1884, reaped in the spring of 1885, having to a great extent turned out a failure, and that crop reaped in the spring of 1885 affected the exports of the two years in question, 1884–5 and 1885–6. Up to December 1884 the crop was looking well in almost every district. Then there was a failure of the dew in Guzerat and Kattiawar, and nearly one-third of the crop was destroyed, consequently it was quite natural that during those two particular years the export should fall off. The damage was mostly on the Bombay side; and whereas I find that during the three previous years to 1885 the average receipts at Bombay were about 1,800,000 bales, the receipts in 1885 were 1,135,000 bales, and that affected the export of the two years in question. But the next year the crops were fairly good all round, and the receipts the very next year, that is to say, the year ending 31st December last, came up to a fair average, between 1,600,000 and 1,700,000 bales. And then I wish also to point out, as he makes a special point of the decreased export of cotton, in regard to cotton for local consumption in India, that it has increased enormously. It is estimated that in Bombay now one-third of all our receipts, that is to say, 600,000 or 700,000 bales, are consumed by the local mills. Just to show what that means, I may state that in the year ending 31st December 1887 Bombay exported to China and Japan 28,600 bales of yarn of 400 lbs., and in the year ending December last, 1886, Bombay exported 219,950 bales; so that, of course, if you are continually using up a very much larger quantity of the cotton, and exporting the yarn, you cannot be exporting the cotton also.

1992. In fact, you mean that the exports cease to take the form of raw products, and take the form of the manufactured article to a certain extent ?—That accounts for some of it, but Mr. O'Conor wishes to make a great point of the fact that simply for these two years there was a falling off in the quantity of cotton, about 15 per cent. in 1884–5, and 17 per cent. in 1885–6, and that this was during the year that exchange fell the most. We had still lower exchange last year, and as we had no failure of the crops in Guzerat and Kattiawar, we had our normal export of cotton again from India. And I wish to point out, sir, that this year's experience —I only go by the telegrams published in the papers—

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shows that the fact of the export trade having been stationary in value during the previous three years does not disprove the theory that a low exchange stimulates exports. Since the close of the official year ending March last, during which time we had that tremendous fall in exchange, the rupee having gone down 2*d.*, roughly speaking, lower than ever it did before, to 1*s.* 4*d.*, the exports for the eight months ending November last were 553,000,000 of rupees, against 506,000,000 during 1885, an increase of 47,000,000, or about 8½ per cent. And also with regard to wheat, during the first six months of the year, the six months ending September, when exchange was down to that low rate of 1*s.* 4*d.*, the exports of wheat were 747,000 tons, against, during the same six months of 1885, only 557,235 tons, and in 1884 445,350 tons. Again, during the same six months, the export of yarns was 48,000,000 lbs., as against 40,000,000 during the six months of the previous year, and 33,000,000 lbs. during the same six months of the year 1884.

1993. (*Mr. Barbour.*) Are those the exports of yarn from India?—Yes, Indian made yarns.

1994. Are they exported to silver using countries?—Yes.

1995. That would not be affected by the exchange, I suppose—China and Japan?—No, they would not be much affected by the exchange.

1996. Except that the fall in exchange might shut out English yarns?—It would help to shut out English yarn. I just adduced these facts to show, as Mr. O'Conor wished to make an argument of the effect on exports during those three years during which exchange had fallen, that, singularly enough, during the first six months of this year, when the exchange went down 2*d.* lower than ever before, the exports were materially increased, so that disposes of the argument that when exchange was low exports did not increase.

1997. (*Sir T. Farrer.*) I have taken out of the monthly returns just published the figures of trade between the United Kingdom and India for 1886. Compared with those for 1885 they are as follows: Imports from India in 1885 were 31,900,000*l.*, in 1886, 32,100,000*l.*, an increase of 200,000*l.* The exports to India from the United Kingdom were in 1885, 29,300,000*l.*, in 1886, 31,300,000*l.*, an increase of 2,000,000*l.* That is, that while in the latter year the imports from India into the United Kingdom remained just about the same, the exports from the United Kingdom to India increased by 2,000,000*l.*?—Yes; and bearing on that you would perhaps just allow me to mention cotton goods. During 1886 we exported to India 2,119,000,000 yards, and in 1885 only 1,664,000,000 yards, so that there was an increase of 455,000,000 yards. The values were respectively 18,483,688*l.* and 15,477,366*l.*, so that we had an increase last year in the export of cotton goods to India of 27 per cent. in quantity, and 19½ per cent. in value.

1998. (*Mr. Barbour.*) Do you infer from that that a low exchange favours exports from this country to India, or that large exports from this country to India cause a low exchange? Do you think that the two are connected in any way?—I was not drawing any particular inference from that at this moment, but I have always argued with my bimetallist cotton goods exporting friends in Manchester that they were wrong in thinking that this fall in exchange checked their business with the East. I was under the impression that the fact of India getting so many more rupees for her produce than she would have got if the exchange had not fallen put her in a better position as a buyer, because it gave her more money to buy our exports with.

1999. (*The Chairman.*) Your view is that not only the export trade of India is stimulated, but that the import trade is also stimulated to a great extent?—That is my view. My view is borne out by the fact that she takes not merely an increase in bullion, but more of our manufactures to pay for her exports as well.

2000. Any conclusion from the statistics of the last few years is liable to be misleading, on account of the other causes which have operated?—It is. I was merely bringing up these statistics at the present time in answer to the minute which has been put forward on behalf of the Government of India by Mr. O'Conor, and which no doubt will have great weight with the members of the Commission. And in connexion with that perhaps you would just allow me to draw attention to another thing. We ought to take a longer period than those three years referred to by Mr. O'Conor. I would go back to his own report of 1884–5, in which he gives a comparison between the progress of the trade of India and the progress or retrogression of the trade of other leading countries; and he points out that, as between 1873 and 1884 (eleven years of falling exchange), while the trade of Germany only increased 7·89 per cent., Italy 3·14 per cent., the United States of America 21·4 per cent., France 7·27 per cent., India increased 57·49 per cent., so that her increase of course was immensely large compared with any other country. Mr. O'Conor himself, in that very report, published a year before he wrote that minute, says,—"If we look back over a series of years, we shall find "that the trade of this country has expanded far "more rapidly than that of either England, France, "Germany, Italy, and the United States." Of course I admit that India has had her resources more developed proportionately than some other countries. I admit that the railway extension in India has been very large during those years, and, after a great deal of fighting, we merchants have got rates very much reduced, but the railway extension in India has, nevertheless, been nothing compared with the extension in America for the same time.

2001. Have freights fallen in America to the same extent as they have fallen in England?—Far more. The sea freights have fallen in the same proportion. The inland freights by rail are lower still in America than in India for export produce as far as anything I have seen.

2002. Has the railway extension been much larger in America than in India?—Immensely larger. America has put down as much in one year as you have in India in 30 years.

2003. But is it not the fact that the railways in India tap districts which are already highly developed, while the railway extension in America goes to new districts awaiting the railway system in order to develop?—To a great extent that is so.

2004. Therefore *pro tanto* an equal mileage in India produces an immediate effect on the trade of the country?—I think you will find that the railway extension per annum in America during the average of these years, from 1873 to 1885, has been as great per annum as the whole of the increase for these 11 or 12 years in India.

2005. (*Mr. Barbour.*) In those figures which you gave us showing the relative increase of the foreign trade of different countries, I think the trade of all the other countries was measured in gold, and that of India in silver?—Certainly.

2006. That would make some alteration?—That makes a considerable difference. They are all in their own currency. I have merely given the quotation exactly as Mr. O'Conor gave it himself.

2007. (*The Chairman.*) You have not reduced them to a common measure?—No, I have given Mr. O'Conor's own figures.

2008. Has not Mr. O'Conor reduced them to a common measure in his report?—No. One is an increase in silver and the other is gold. With regard to what you say about rates, America is, on the average, getting her produce carried by railway at infinitely cheaper rates than India. It is quite true that by some of the great trunk lines in India, the East Indian especially, and the Bombay and Baroda and the Rajpootana, the rates are low, though perhaps not so low as in America, but the Great Indian Peninsula, which taps a country, roughly speaking, as large as France and Germany, practically has a monopoly, and they are still charging very high rates, and therefore,

on the average, our rates in India are certainly not down to the American model of cheapness.

2009. Taking a survey of the whole Indian question, and keeping in mind the well known difficulties which the Government of India are in in order to meet their obligations in India, is it your opinion that India has benefited by the fall of silver?—Decidedly. If it is a question you are going into I will give you some figures, because I am of opinion that the accounts put forward by the Government of India are to a certain extent misleading. They are certainly misleading to all people who do not take the trouble to go into a very considerable amount of investigation. If you will allow me, I should like to draw attention to a few figures connected with the position of the Government of India. In the first place, the loss is stated in the budget in a way which I know, as a matter of fact, misleads all people in England who have not made a special study of Indian finance. For instance, in the last budget statement, in one of the paragraphs we see that the loss this year is estimated at 4,800,000*l.* in round figures against 3,400,000*l.* last year, and I find that all people who are not absolutely experts take these figures for granted. For instance, I heard an ex-Viceroy, speaking about Indian finance, say that the budget this year estimates for a loss of 4,800,000*l.* in exchange. To begin with, that does not mean pounds sterling. If the budget had been waded through it would have been found that it meant tens of rupees. If you convert the loss into sterling at the rate they have estimated to get this year, 1*s.* 6*d.*, you must deduct 1,200,000*l.* of it. Well, then, I find that, except among experts, everybody takes it for granted that that is an absolute loss, and the people are very much surprised, as a rule, to find that all that is meant is that it is the difference between drawing at the rate they would like to draw at, 2*s.*, and say this year the estimated rate of drawing, 1*s.* 6*d.* Then the 2*s.* the par rate they take and calculate their loss on is a pure assumption. I find, looking at the average rate of the Government drawing, that in no year since 1860, even during the time when the exchange was so high through cotton advancing 500 per cent., did the Government get an average of 2*s.* I mention this just to show how absurd the assumption is that they ought to obtain 2*s.*, and to show that if you were to resuscitate silver, and bring it up to 15½ to 1, they would not get 2*s.*; and according to their theory they still would have to state in their budget that they had a great loss on exchange, even if we had a bimetallic international convention on the basis of 15½ to 1.

2010. It is not quite fair to call it the theory of the Government of India; it is the theory rather of the people who hastily read the Government accounts?—Yes, but it is very important that people in this country, those outside the Commission, should know that this loss is to a great extent fictitious. It is true that if you wade through the figures of the budget that loss is no longer stated in the actual accounts. If they spend 1,000*l.* in England and it costs them 12,000 rupees, they now put 12,000 rupees as the cost of the article, instead of 10,000 as the cost of the article and 2,000 as loss in exchange, as formerly. But although the accounts are made up in that way, what the people look at here, and what an ex-Viceroy, speaking at Manchester, said, is that the loss by exchange is 4,800,000*l.* They did not go through the budget accounts, but took the plain statement.

2011. (*Mr. Barbour.*) Can you produce any statement in the budget or the accounts to show that 4,800,000*l.* was stated by the Government of India this year to be the loss by exchange?—Allow me to refer to the quotation:—"The vital difficulty which "the Government of India has had to encounter is "that, with a revenue which is almost wholly in "silver, it has to provide the funds necessary for the "protection of the country, whether from famine or "from the point of view of military requirements, to "bear an ever increasing burden on account of gold "obligations, and to add largely to this burden by "borrowing in gold. It has seen its liabilities under "this head increase for the two years 1884–5 and "1885–6 from 3,426,424*l.* in the accounts of 1884–5 "to 3,672,300*l.* in the budget estimate of 1885–6 "and to 4,424,900*l.* in the revised estimate for that "year. It has estimated its liabilities in the coming "year at 4,837,000*l.*, so that in three years it has "added to its estimates of expenditure the sum of "over one and a third million on this one account "alone, but in spite of this it has absolutely no means "of judging how far in the course of the year the "fall of silver may add to its estimated expenditure "on account of exchange."

2012. I do not see that the total amount mentioned is represented to be actual loss. It is merely said that the amount the Government has to provide has increased?—But people understand that the 4,837,000*l.* referred to meant loss, and further on there are further statements with regard to loss. There are several quotations I could find when you come to that point.

2013. (*The Chairman.*) The important thing is, not exactly what mistakes an uninstructed public make about the loss to the Government of India, but what that loss really amounts to. We will be very glad of your assistance in elucidating that point?—I have pointed out that, even when we had silver averaging 61*d.* the ounce, they did not get 2*s.* Therefore, to call it a loss as compared with 2*s.* is erroneous from that point of view, especially as silver can be laid down in India cheaper than it was then. The next point is this, that the amount which they remit for the old guaranteed railways as a balance is fixed by contract at 1*s.* 10*d.* Therefore it cannot be right to say that the loss on such amounts is as between 2*s.* and the rate at which they draw; the loss is as between 1*s.* 10*d.* and the rate at which they draw.

2014. But this is the same correction, is it not, to which you have already called attention?—No, it is a different thing altogether. I pointed out what their average rate of drawing was during the years when silver was at high prices, that is, that they did not get 2*s.* then. They got various rates. 1*s.* 10$\frac{3}{4}$*d.* to 1*s.* 11$\frac{3}{16}$*d.* were the rates for the six years ending with 1872–73. Therefore, to assume that exchange would be 2*s.*, if you had 15½ to one, would be erroneous. In the second place there is a fixed rate, as far as I can make out, from papers at my disposal, affecting old guaranteed railways for adjusting the balance of their remittances of 1*s.* 10*d.* If that rate is adjusted at 1*s.* 10*d.*, it would not be right to calculate your loss as between 2*s.*, because the loss is as between 1*s.* 10*d.*, and the rate at which you draw. It is also quite fictitious of course to say that they lose 6*d.* in every rupee in respect of stores they buy in England. From what I can make out, this year they are to buy between three and four million pounds worth of stores in England for various purposes, for railway and other Government stores. Now they buy those at those depreciated gold prices, and they draw for them at the rate of the day when they pay for them. Well, there is no loss on a transaction like that. I might as well, if I bought 100 bales of shirtings in Manchester for shipment to India, begin by debiting myself with 25 per cent. on the transaction; because I drew at 1*s.* 6*d.* instead of 2*s.* to pay for them.

2015. (*Mr. Barbour.*) Has the Government of India ever said that there was a loss on the purchase of these stores?—That is part of the remittances.

2016. On stores required for the construction of railways, I agree with you that there is no real loss; but, supposing there was, it would not be charged to exchange at all, or shown in that figure of 4,800,000*l.* to which you refer?—Up to last year they would have put it as a loss, as far as I can make out.

2017. The Government of India has never said, so far as I am aware, that there is a real loss on the purchase of stores?—No; but in the Indian statement they take the loss on the whole remittances, and part of these remittances would be for stores.

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2018. I will read to you what Sir Evelyn Baring said on this question, in his financial statement for 1883:—"To speak of the total amount entered "under 'Loss by Exchange' as money lost is, of "course, wholly erroneous, for under any reasonable "hypothesis in respect to the relative value of gold "and silver, only a portion of the amount can be con- "sidered as a real loss. We propose, therefore, for "the future, in so far as the published accounts are "concerned, to get rid of the item 'Gain by Exchange,' "on the revenue side of the account altogether, to "discontinue the use of the word 'Loss,' and to insert "a net figure on the expenditure side of the account "under the head of 'Exchange on Transactions with "'London.'"—Yes, I know they do. They have put it in the accounts this year in that way.

2019. But these remarks were made in March 1883, and the change was made at that time?—Well, then, one very important thing that I wish to point out is this, that of course we know that a very great amount, a very large proportion of these remittances to England are in respect of loans; and when we come to talk of losses to the Government of India, you must take into consideration, I think, the difference in the rate of interest. The Government of India, roundly speaking, when they borrow in sterling in England borrow about one half per cent. cheaper than they can borrow in rupees in India. Of course it is quite manifest that if that half per cent. were put to a sinking fund at compound interest, it would not only suffice to pay any loss on interest, but it would, in a measurable time, pay off the loan. For instance, looking to the two latest quotations, I find that the 3½ per cent. loan, payable in 1931, was 100 to 100½ (from the "Economist" of 29th January). In "The Times of India" of 19th January, 4 per cent. paper stood at 96½, which was equal to 4⅛ per cent. There was a difference, therefore, last month of ⅝ per cent. between the rates at which the Government would be able to borrow in the two countries.

2020. (*The Chairman.*) But has that any bearing upon this question?—I thought, sir it had a very important bearing as to whether the loss that the Government of India have in remitting to England every year is compensated for in any way.

2021. But the rate at which India can borrow in England, I suppose, simply depends on the credit of India?—No, they can borrow in India to-day if they wish, and then they have no risk of exchange on their shoulders. They take the risk of exchange and they get a lower rate of interest, and therefore I think it is very important to point out that part of this so-called loss in exchange in remittance is voluntarily incurred because by borrowing in the more stable currency they are able to save ⅝ per cent. per annum.

2022. But supposing England and India used the same currency, India would be able to borrow in England at the same rate as she would now?—If there was no rate of exchange between the two countries she would.

2023. Therefore I do not see the relevancy to her power of borrowing of this rate of exchange. Is it not a state of things that would equally occur if they used the same currency?—India would not borrow at the same rate in India as in England. If the interest were payable in India she would not be able to borrow at the same rate as if it was payable in England. That is, even if she had the same currency. There would always be an exchange against India if you had a gold currency in India. There is far less capital in India; the rate of interest is always higher, and when there was a rush of business money would get tight, and you could not get the specie to relieve the pressure instantly. You have a four weeks' voyage from London, and therefore you would have great fluctuations in exchange even if you had the same currency. I argue that from the fact that, even when you had silver maintained at a stable rate of 61*d.* per ounce, I have seen the rupee change 3*d.* or 4*d.* With the telegraph the difference would not be so great, but the sea voyage was very much the same twenty years ago as now. You would have great fluctuations of exchange even with the same currency, and therefore the Government of India would not be able to borrow with interest payable and the capital repayable in India at the same rate as in London.

2024. It would, no doubt, be convenient for the Government of India to borrow in London. Whether that should be put as a set-off against loss by exchange is another matter?—I maintain that the mere fact of borrowing, payable in London, gives her a much lower rate of interest than she would be able to obtain, even if you had the same currency in India as in England.

2025. But why should that be set off against nominal loss by exchange?—Because in taking into consideration what India loses by having to remit in payment of gold liabilities in England while her revenue is in silver you must, of course, calculate any saving which she may be fairly assumed to have attained by borrowing, payable in London, as compared with borrowing, payable in India. She goes there for the lower rate of interest, and there are certain disadvantages in the remitting, whereas if she borrowed, payable in India, she would pay a higher rate of interest. The one I think is fairly to be set against the other.

2026. Is there any further set-off you would make against the loss by exchange which is usually stated to fall upon the Indian Government?—I do not at the moment remember any further set-off. I merely wish to reiterate what I said, that of course if investigated, that so-called amount of 4,837,000*l.* is, to a great extent, fictitious, and I hope that the members of the Commission, if they agree with me, will bear that before them in estimating India's gain or loss by the fall in silver. I wish, sir, to draw attention to one or two other statements in the budget.

2027. One question before you leave that. It is only fictitious practically and substantially by the amount by which 2*s.* differs from 1*s.* 10*d.* or 1*s.* 10½*d.*?—With regard to the amount that is remitted for the guaranteed railways, there of course it is wrong by 2*d.*, and in respect of interest on loans, say borrowed this year, if they have to remit next year at the same exchange, of course there is no loss.

2028. It depends on the age of the loan?—The age of the loan. If they borrowed 3,000,000*l.* this year, and the exchange averaged 1*s.* 6*d.* this year, and next year the exchange averaged 1*s.* 6*d.*, and they have to remit the money next year, there is no loss in that case, I maintain.

2029. Have you considered how much of the annual loss by exchange is a real loss?—No; I have had difficulty in making up my statements because the trade returns are so long in coming out.

2030. But the Indian Government are quite alive to these modifications?—Yes, only that the Indian Government budget statement, you know, is like a special pleading in favour of bimetallism, and, while doing that, reiterates this statement that they lose 4,837,000*l.* in remitting.

2031. I think Mr. Waterfield, who is being examined before the Commission, has put the loss at its real and not at its nominal rate?—That is all I wish to draw attention to. The Government of India say, "We could have provided for famine railways, "we could have met our increased military expen- "diture for our frontier railways, for our coast "defences, for our frontier works, &c., if we had been "able to carry out our calculations in a medium "which possessed some stability."

2032. But I do not understand that you necessarily differ from that?—Yes, I do, sir. I say that, according to the budget statement of the Government of India this year, the increase in military expenditure over estimate was 3,291,000*l.*, and I cannot see how a few hundred thousand pounds more or less of a fluctuation in exchange being saved would enable them to meet 3,291,000*l.* of increased expenditure.

2033. (*Mr. Barbour.*) Did not that statement of the budget about the ability to provide for certain

charges refer to what could be done as regards the future, not to the year that was closing?—No. The statement goes on,—"The uncertainty in respect of "silver neutralizes the most carefully formed forecasts "of the future, and renders the task of budget making "almost illusory." When a Government was in such a sound financial position, to make such an outcry about the fluctuations which may occur in exchange really seems like special pleading for bimetallism.

2034. That is not the intention of the Government, but you would admit that the substantial and real loss would amount to some millions?—This budget statement refers to the difficulty in budget making. Reading their statement on that point, one would imagine that there was no elasticity in the revenue. I maintain that in the present financial position of the Government of India it is not correct to say that a question of a few hundred thousand pounds per annum in their loss by exchange makes budget making almost illusory.

2035. Are you not confusing two difficulties which the Government of India feel, one which they say prevents them carrying out those defensive preparations on the north-west frontier, and the difficulty of arranging their budget for the coming year, in which an oscillation of 400,000*l.* or 500,000*l.* can very easily make a difference?—But all through that budget statement you see a plea in favour of bimetallism. Reading that in connexion with other statements from the Government of India, you see the same thing. They make out a case, as it were, and they plead that unless you resuscitate silver, and save them from these possible fluctuations in exchange, there is no chance of their being able to make both ends meet. That is about the substance of the whole argument, and I wish to point out that the whole fluctuation may be 500,000*l.* or 1,000,000*l.* When you are dealing with such an elastic revenue and such large means it does not make budget making illusory. According to the Statistical Abstract, which is sometimes difficult to understand, the Government borrowed during the 10 years ending with 1885 nearly 59,000,000*l.* It spent on railways, irrigation, harbours, roads, and other public works, 116,000,000*l.*, so that, in round figures, during the 10 years ending 1885 the financial position of the Government of India was so satisfactory that out of revenue they were able to spend 6,000,000*l.* annually on public works, so that I do not see that a few hundred thousand pounds loss in exchange should put them into such sore straits and make budget making illusory.

2036. I must ask you this question again; are you not confusing two entirely distinct difficulties under which the Government allege that they suffer? One is the fact that they have actually to pay more to liquidate their own debts by 3,000,000*l.* or 4,000,000*l.*; the other is that, in their forecast of approaching financial ways, they cannot, within some hundreds of thousands of pounds, tell what their expenditure may be?—That is the cause that they give forth as making their budget illusory.

2037. It makes the difference between a surplus and a deficit?—Yes, but I do not see how, if they were quite sure they were not going to have a loss of 500,000*l.* or 600,000*l.* as compared with their budget, that would prevent budget making from being illusory. They spend above 3,000,000*l.* for frontier defences and Burmah in one year.

2038. The difficulty of making the budget arises from the fluctuation; the difficulty of providing frontier defences is provided by a permanent fall?—I am speaking of the fluctuation only; they speak here as if the fluctuations make budget making illusory.

2039. It has no connexion with the north-west frontier. That is not the difficulty which they refer to in that last passage?—If you put the two together. I think that where they are dealing with such large items it is a mistake to speak of the possible difference of a few hundred thousand pounds in exchange making budget making illusory. I want to say another word in connexion with these same paragraphs. They say that if they had a stable medium, if they had not to arrange for this possible loss in exchange, "We "could have provided for famine railways, we could "have met our increased military expenditure for "our frontier railways, for our coast defences, for "our frontier works, &c., if we had been able to "carry out our calculations in a medium which "possessed some stability." I think that is a mistake. Where they have such a large amount of revenue to deal with, a possible difference of 500,000*l.* or 1,000,000*l.* on one item in 70,000,000*l.* does not make budget making illusory.

2039*a*. I think the gentleman who penned that paragraph is imagining a stable medium of exchange at 1*s.* 10*d.* and not 1*s.* 6*d.*?—Yes, but they are arguing in favour of bimetallism. I mentioned the position of the Government of India as to their being able to spend 6,000,000*l.* out of revenue annually on public works, and that therefore this was not such a very serious matter, this question of a few hundred thousands more or less loss in exchange.

2040. Now as to the other point which you mentioned, as to this other fall in silver, which undoubtedly necessitates their spending more rupees for their remittance to England?—I maintain that against that there is a great deal to be set off, that there is practically, I believe, no loss to the Government. I believe that the exports have been developed, and of course that means that a large portion of the immense increase in railway traffic receipts must have come into the Government exchequer. Only a very small portion of the whole increase in receipts is divided in shape of the surplus profits with shareholders of guaranteed railways. And now this is an instance of that progress. I find that in 1883, and I am obliged to take these old records because we have not got the later books, there were 10,144 miles of railway open, while in 1873, only 5,370, an increase of 4,777 miles, that is to say, the increase in the mileage open is 89 per cent. as between 1873 and 1883. I find on the other hand that although rates have been greatly reduced during that time, as those gentlemen connected with India know, the revenue from railways as between 1883 and 1873 has increased by 280 per cent.

2040*a*. The revenue from railways?—The mileage of open railways has increased only 89 per cent., and the revenue has increased 280 per cent. Taking it at the 2*s.* exchange the revenue has increased from 2,880,000*l.* to 8,090,000*l.*

2041. Have you any figures as to increase of expenditure in working railways?—No, but I will give you other figures with regard to net revenue which bring that out too. To show the improved position, I mention that in 1873 the budget loss on railways, with a much smaller mileage open, was 2,163,000*l.*, including loss in exchange. In 1882 the loss on railway working was only 205,000*l.*, although the loss in exchange had increased from 169,000*l.* in 1873 to 1,315,000*l.* in 1882. They were able to pay a loss through exchange of 1,300,000*l.* in 1882 as against a loss of 169,000*l.* only in 1873, and yet the net loss from railways, including exchange, was less, in round numbers, by 2,000,000*l.* From those figures it will be seen that the position of the Government of India has immensely improved, that they must be receiving a large increase in railway revenue through the fall in silver to make up for the increased number of rupees that they have to pay for their remittance.

2042. (*The Chairman.*) But increase of railways is not due to the fall in silver?—I say the increase of railway revenue is to some extent due to the fall in silver, having developed the export trade. I wish to point out one thing, as the matter will probably be brought before you. I see that Mr. Palgrave, in a minute appended to the Third Report of the Depression of Trade Commission, speaks of the Indian salt revenue not having expanded since 1873. While pointing out that the drop in silver has assisted the develop-

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ment of the railway traffic, he says it has not developed the revenue in other directions so very much. He instances salt, and points out that the revenue from salt in 1882–3 was a little over 6,000,000*l.*, and that it was about the same amount in 1872–3. When I saw that I remembered that there had been a very considerable reduction in the rate, and I managed to find a budget statement of 1881–2, and saw that up to 1882 the rate of salt duty was in Bengal 2 rupees 14 annas, elsewhere 2 rupees 8 annas. It was during that very year reduced to two rupees all round, so that the revenue was maintained with that immense reduction in rate. Going back to 1881–2, a year in which there was no reduction, and comparing it with 1872–3, the other year taken by Mr. Palgrave, I found that there was an increase of 1,208,588*l.*, fully 16 per cent.; and I think, though I do not know that I shall be able to find the papers, that in 1873, or about 1873, there was some other reduction made in the salt rate. This increase we may say was in spite of some reduction as between 1873 and 1882.

2043. (*Mr. Barbour.*) Are you aware whether, between 1872–3 and 1881–2, arrangements were made with the native states of India which enabled the Government of India to collect the salt duty on salt consumed in those native states; and, if so, would not that account for a portion of the increase between 1882–3 and 1871–2?—What I wanted to point out was that Mr. Palgrave, in those particular figures, was mistaken in the inference that he drew. He was not aware of the reduction during those two particular years of course. Another instance of the progress of India is given in the budget statement of this year. It is where the finance minister draws attention to the fact that the interest payable on loans not covered by public works has been reduced, as compared with 1877–8, by 940,348*l.* Of course, as the information is not in the budget statement, I am not able to say whether this is altogether by reduction of debt or merely by reduction in the rate of interest through reissuing the loans. On looking at the Statistical Abstract for 1884–5, and comparing it with 1878, it seems that the balance of loan not covered by public debt has however decreased in those years from 105,000,000*l.* to 88,000,000*l.*, so that somehow or other the Government have managed to wipe off much of the debt not covered by great public works, and reduce the interest by 940,348*l.* per annum. Of course many other instances might be adduced to show that India, during the last 10 or 12 years, has been prospering. These few I have picked out as being, I think, undoubted evidence of that fact, and I will not trouble the Commission with any more. I dare say the facts are before their minds; but, as Mr. Barbour is a member of this Commission, I would just like to point out what he said in his book on bimetallism published last year. He said, "The "progress of the Indian revenue shows that the "general prosperity of the country, which is largely "due to the stability of price maintained by the "partial demonetisation of silver, very materially "counterbalances, even from a purely financial point "of view, the increasing burden thrown upon the "Government of India by the fall in the rate of "exchange."

2044. You have no doubt that in recent years there has been very considerable prosperity in India as compared with former times?—That is my opinion.

2045. I do not think there is any doubt that in many respects the Indian revenue has shown considerable elasticity in recent years?—That is my opinion.

2046. I think you said, with regard to that question of loss by exchange, that the Government put forward the loss as 4,800,000*l.* I read you a passage from the financial statement of 1883–4, which showed that the Government do not look on that sum as the real measure of loss, or as representing the extra number of rupees which they have to find owing to the fall in exchange?—I know they do not; that was why I was careful to explain that if experts waded through all the published statements they would see that the Government of India understood their own position. What I was complaining of was that by these budget statements even an ex-Viceroy could be so misled as to go to a public meeting and dilate on the terrible effect of this loss of 4,800,000*l.*

2047. We had evidence from Mr. Waterfield the other day that a fall in exchange to the extent of 1*d.* in the rupee made a difference of about 10,000,000 of rupees in the amount that had to be remitted home?—Yes.

2048. I suppose you have not seen the calculation, but would you challenge that statement?—I think that, no doubt, is quite correct.

2049. Of course, in the case of a loan, you must look at the rate of exchange at the time the loan was taken up?—Yes.

2050. If it was taken up at 1*s.* 8*d.*, and had fallen to 1*s.* 6*d.*, you lose the difference between 1*s.* 8*d.* and 1*s.* 6*d.*?—Certainly.

2051. And in the case of stores you hold there is no loss. The Government of India knows the gold and silver price; it need not buy stores unless it likes?—Exactly.

2052. If it goes into a contract at one time at a certain rate of exchange, and if before that contract is completed the rate of exchange alters, and causes it to pay more rupees, that might be looked upon as a loss?—Oh, undoubtedly, the fall between the day of contract and the day of payment is a loss.

2053. You said an extra loss from a fall in exchange was not of so much importance when the revenue amounted to 70,000,000*l.*?—What I meant was, speaking as a per-centage, a fluctuation of a few hundred thousands in a country with a 70,000,000*l.* budget is not a great deal.

2054. Is not that 70,000,000*l.* what is called gross revenue? For instance, it includes the whole of the railway receipts?—Yes.

2055. Now, if you included the railway receipts of all England in an English budget, you would swell it to a very great extent?—Yes, certainly.

2056. So that the loss of a few hundred thousand pounds by exchange is a considerable amount if you consider the net revenue of the country of India?—Yes, it makes a very much larger per-centage, but I also meant that they were dealing with items of revenue which might easily fluctuate quite as much as silver, for example, railways themselves.

2057. And in fact the revenue of the Government of India is exposed to many difficulties and uncertainties. The railway receipts and the land revenue may fall off, the opium revenue is uncertain, and in comparison with those you think the exchange difficulty is not an overwhelming one?—I think not so overwhelming a one as to make budget making illusory. In round numbers the total receipts from all railways in 1883 were 11,000,000*l.*

2058. They would be considerably more now, of course?—Yes, the railways increase every year. Of course, they have 2,000 more miles open now.

2059. I think Mr. Waterfield said the net revenue was 44,000,000*l.* If there was a fall of 1*d.* that would make 1,000,000*l.*, or a proportion of one out of 44, you see?—Oh yes, it makes very much larger per-centage.

2060. And as the Government of India is subject to so many difficulties and uncertainties in connexion with its finance and in other matters, would it not be advisable to remove any uncertainty that it is reasonably practicable to remove?—I believe you have counterbalancing influences. You have got the fact, for instance, that last year, with the lowest exchange, you have the biggest trade ever known. You have the biggest export last year, and if Government do the carrying and get the railway rates on your enormous increase in exports and imports, of course there alone you have a set-off.

2061. That is all on the assumption that the rate of exchange is the cause of the increased exports?—There is no great increase in the number of miles

opened last year to account for the great increase in the quantity of goods carried.

2062. I believe the Government of India in its proposals does not insist on having a higher value of silver. I think what it asks for is a fixed ratio, a fairly constant ratio. You would not see the same objection to a constant ratio if it was 1*s.* 6*d.* per rupee that you do see to 2*s.* per rupee, or any such high ratio?—Very many of my objections would be at once removed. I have not exactly made up my mind on that subject, but, of course, my strongest objection to the general argument of bimetallists is that if you push them into a corner they want 15½ to 1 again.

2063. You do not see any objection to the existing market ratio being made permanent, if that be practicable?—I see very little objection to it. I would not be prepared to take a very strong line of opposition to a proposal to fix it on anything like to-day's basis, and I may say in connexion with that that about a year ago I was talking with the chief manager of one of the largest exchange banks in London, and I said, "Now, are you a bimetallist?" "Well," he said, "I "am a bimetallist, if you fix it on to-day's ratio. It "would suit my own business in the bank much "better. These fluctuations cause anxiety, although "we can protect ourselves against them. But, "although I am a bimetallist, if they proposed to "raise silver by 20 or 30 per cent. I would oppose "it by every possible argument, because it would "do far more evil than any good it could do in con"nexion with India, and also to money interests in "this country."

2064. (*The Chairman.*) Would the dislocation caused by a return to the old relative prices of silver and gold produce more harm than the change from the old prices to the new has done?—Well, you see, we have taken practically from 1873 to 1887 to fall 4½*d.* in the rupee, and if you were to put it back 4½*d.*, in a few months, I think the injury would be enormous.

2065. It is not the means of the exchange but the rapidity of the exchange that you would regard as so serious?—I think it is the rapidity that I object to mainly, and I think in regard to India it would be an immense injury.

2066. (*Mr. Barbour.*) Then with regard to this question of budget making, you see there comes in the question of the uncertainty in the exchange. If the exchange falls 1*d.* in the year, as it might very well do, you are a million out in that direction, and if it rises a 1*d.* you are a million better off in the other direction. In this way you get a possible difference of two millions, which is a serious matter of uncertainty in arranging for the expenditure?—If you had bimetallism I believe you would have fluctuations of 3 or 4 per cent. in exchange. I have had a difference of 3 or 4 per cent. between Bombay and a place up country in silver when silver got scarce.

2067. Would you have so large a fluctuation extending over a whole year? The fluctuation to which you refer might be for a few days?—I have been in Bombay when a pressure set in in February, money going to 12 or 15 per cent., and with the Government willing to sell telegraphic transfers, and silver shipped to India by every steamer, we did not get over the difficulty till the general export season was over.

2068. In any case you would have that difficulty?—And if you had money suddenly going up in Bombay, Calcutta, and Madras to any great extent, as it would do in any great export season, you would see exchange fluctuating 4 or 5 per cent., even if you had a fixed currency between the two countries.

2069. But the fluctuations would be in the nature of a temporary rise, I suppose?—They would all oscillate from a given centre.

2070. It would not affect the Government so seriously as if the exchange fell 1*d.* or 2*d.* permanently?—No, it would not, and yet this is a curious fact. If you take silver at 61*d.* and see what it costs to lay the rupee down in India, including the mintage, you will find that the cost is much above the average rate obtained by Government in some of the years when silver was maintained at 15½ to 1.

2071. You have seen that the exchange might very easily make a difference of a million either way, a fall or a rise, and it only takes an alteration of a penny in the rupee to have that effect. Is it not highly undesirable in a country like India to be continually changing in the matter of taxation, putting it on one day and taking it off the next? It would be so, but I believe if the exchange falls the export trade for that year is stimulated. Very often exporters of cotton, for instance, have been at a standstill, because people would not pay any higher price in Europe, and sellers were unwilling to take lower prices in India. All at once exchange falls, business goes on, and the Government of India gets the railway charges on the cotton exported.

2072. It is commonly held, I believe, by political economists that countries trade with one another with reference to their respective facilities for the production of particular commodities. For instance, India finds she can produce wheat relatively more cheaply than she can piece goods, and England has special facilities for the production of piece goods. This state of things is held to be the cause of international trade. India sends wheat to this country, and England sends piece goods to India. That is what economists generally state is the origin of international trade. Do you think that view is correct?—Oh, there is no doubt, I think, that the exports and imports pay for each other.

2073. It is the comparative facility which different countries possess for the production of different commodities that causes them to find it convenient and profitable to interchange their respective products?—There is no doubt of that.

2074. Well, then, how could a fall in the rate of exchange affect the facilities that India has for the production of wheat rather than piece goods either one way or the other? Could it give a greater facility for the production of wheat, or would it reduce the facility for the production of wheat as compared with piece goods?—Well, of course, if the producer had to invest all the proceeds of his sale of produce on imported goods, it would be as broad as long to him; but, if a cultivator gets payment in rupees for his produce, he personally, probably, expends very few rupees in the imported goods.

2075. But is there not somebody else who purchases the rest of the articles imported in payment for that wheat?—Yes, that is so.

2076. According to the fall in the rate of exchange this other person has to pay so much more for *his* piece goods?—Yes, he has to pay more according to the value of the rupee for the time being in gold.

2077. Taking India as a whole, not looking at the people who produce these particular articles, it seems to be pretty much as broad as it is long. If she gets more rupees for certain products exported, she has to pay more rupees for certain products imported?—Yes, but she receives more for the balance of her exports.

2078. That balance is payable in gold and silver?—That is payable in gold and silver.

2079. As a matter of fact, India is not getting gold any cheaper than she used to do; she is getting it dearer, is she not?—If she buys gold she has to pay a dearer price for it.

2080. And she pays rather more for her silver than she used to?—Well, she pays of course more of her produce for it.

2081. But a great deal more for the gold?—Yes; but then, of course, the reason why she pays more produce for it is, I believe, because there is a general fall all over the world from the causes I have mentioned in the value of produce.

2082-3. Then don't we come rather to this, that there does not seem to arise so much a benefit to India in her export trade as benefit to India because her prices remain more nearly the same; that is to say, prices in India have fallen, as it were, 10 per

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cent., and prices in England have fallen 30 per cent., and in that respect the Indian producer has an advantage; he has about the same price as before, whereas the English producer has to take 30 per cent. less?—Yes. That is what helps to stimulate the exports; her prices remaining very much the same, only 10 per cent. less against this heavy fall here.

2084. In fact in India prices have remained more nearly the same than they have here?—Yes.

2085. Consequently the Indian producer and Indian manufacturer, in so far as regards the standard, have had some advantage over the English producer and manufacturer?—The advantage to the Indian manufacturer is less than to the cultivator, because the manufacturer of any article the raw material for which is exported pays a higher price at once. Cotton and jute manufacturers, the two great manufactures of India, of course have to pay for their cotton and jute the price regulated by the gold value at home, because we exporters are always willing to pay the equivalent, less a very small margin at any time. A manufacturer has to pay therefore for his cotton or his jute the same price that the English merchants have to pay. And as there is no coal at Bombay except what is imported, the cost of the coal consumed there is enhanced by falling exchange.

2086. But there is this difference—his labour?—He pays for his labour in silver. He is protected in his labour, and any country made stores which he may use. Take the Bombay mills, about which so much is said in Manchester. Their only protection is in the rate of wages; skilled labour has, however, risen in Bombay.

2087. And I suppose if they borrowed a certain amount of money, the burden is less if they originally borrowed in silver than gold. For instance, if a man borrowed 1,000 rupees 15 years ago in India, and somebody else 100*l.* in England, at that time the value of the two amounts would be pretty nearly the same, and so would the interest payable on them, assuming it to be at the same rate. But the one debt would now represent a greater value than the other, and the burden would be proportionally increased?—Yes. As to the Bombay mills, there is a great deal of talk about Lancashire being handicapped by them. They are no doubt protected in regard to labour and country made stores; but, in respect of cotton, there is of course no protection; and, as you know, there is no coal in Bombay. They all burn imported coal, and they therefore pay a higher price for that as exchange rises. The mills which are now being built, and mills which have been built of late years, have all to import their machinery and pay for it at the lower exchange too.

2088. They have an advantage in Bombay, in being nearer the place where the cotton is grown?—There you open up another question, which was discussed when we had the agitation for the abolition of the import duties. When friends in England wrote asking me to help, I replied that they would not get the trade back in coarse goods and yarns, because it was not a question of 3 or 5 per cent. in respect of goods which could be made economically from Indian cotton. This has been proved by the result. The local industry has prospered in spite of the remission of duty.

2089. Do you think the fall in the exchange has been of very great advantage to these Bombay mills?—Well, it has only helped them to the extent I mentioned, in the wages and the few country stores which they use. I hold and maintain that the greater extension in the export trade of those yarns is due to the fact that when the thing was once properly started, it was found that it was a very profitable industry. They get the cotton there before it is pressed, and they can make better work with it than after it has had 1,200 or 1,500 tons pressure on it to prepare it for shipment. With coarse numbers of yarn and coarse cloths they have of late years, on the average, been making large dividends on the mills, when all those goods if shipped from Lancashire would have shown a great loss indeed, the natural advantages being so great.

2090. It comes to this, that the Bombay trade in manufactured cotton, especially the export trade, is due to natural advantages which Bombay possesses, and not to any fall in exchange?—Exchange has helped them a little, no doubt, but I have a very strong opinion to the effect that the trade would have been developed without it on account of its natural advantages. The moment they try to use Indian cotton for finer yarns than it is suited for—it is very different when spinning yarn which requires cotton with long staple—English competition will come in.

2091. It is more the natural advantages of India that has helped her in the export trade than a fall in the exchange?—As regards wheat, of course the opening of the Suez Canal has been a great help. It is always a mistake to attribute too much to the fall of the exchange. I believe it has had something to do with it. As you asked me about wheat, I would say that before the opening of the Suez Canal there was almost no wheat exported from India. In 1872, the time I was Chairman of the Chamber at Bombay, wheat exporters who were trying to open up the trade pointed out to me that the whole revenue from wheat was only about 6,000 rupees, and urged that something should be done to take the duty off and give the trade a chance, and that this could be done without any great loss of revenue. I had a talk about it in Bombay with Lord Northbrook and Sir Evelyn Baring, and the latter wrote me a letter and said they would repeal the duty. The extension of railways, cheap railway transit, and cheap freight have had a very great deal to do with the development of the export trade, but at the same time America has had all these advantages too.

2092. The advantage the Indian producer has had over the American producer in regard to wheat is that the price has been continually falling for the American producer more than for the Indian?—Yes.

2093. The land in India is not rendered more productive, nor Indian labour more efficient, by the fall in exchange, nor does that fall in any way increase the natural advantages of India, but the Indian producer has had the advantage of a comparatively stable standard?—Yes; Mr. Moreton Frewen made a speech in London at a congress of Chambers of Commerce of the Empire as to how far the Indian wheat trade is protected by the fall in silver. He went on to say, "And "this is the force within the United States which "banded together all the producers, the farmers, the "farmers of the west and south, to defeat the recent "attempt to suspend the coinage of silver in the "United States."

2094. So it appears to come to this, that, as the political economists say, the export and import trade of India depends very much on the natural facilities in that country for the production of certain articles, and that the fall in exchange has only been of benefit in so far as India has been working on fairly stable prices?—It has helped, of course, to keep her prices stable while agricultural produce in other countries has been falling, and therefore it has helped to stimulate her export trade.

2095. India has had an advantage as compared with gold countries, but the fall in exchange has not made the soil more fertile, or had any effect of that nature. It is in some respects an artificial advantage, an advantage derived from the currency. You would not call the fall in exchange a natural advantage?—No, of course not.

2096. It does not make the soil in one country more fertile than in another, or anything of that sort?—No, but even if it be an artificial advantage, I do not think the country ought to give it up.

2097. (*The Chairman.*) That is not quite consistent with the evidence you gave to me. I thought your contention was that the advantage the Indian wheat exporter got was not that the silver remained tolerably stationary in value, but while it did so gold would rise, which is quite a different proposition?—

No, what I wished to establish in the first instance was that there had been a great fall in the consuming countries, mainly owing to the reasons that I stated, and that the fall in silver had prevented the Indian agriculturist from feeling the extent of that fall in the consuming countries. He had been saved from 20 per cent. of that fall, and that had stimulated cultivation and export.

2098. But supposing silver had remained stationary in value in India, and gold in England, instead of rising, had fallen in value, I apprehend that in your view the Indian wheat producer would have got no advantage, but a disadvantage?—I think he would have been at a disadvantage, because I believe that if gold remained stationary, the special articles, the quantity of which has been so very largely produced, would have fallen, and therefore he would of course have been in a worse position than he is now.

2099. Let me put it in this way. Supposing prices had remained stationary in India, and prices in England, instead of falling, had risen, the Indian producer would then have been at no special advantage?—No, not if you had prices rising in England, certainly.

2100. And therefore the advantage the Indian producer has is not, as Mr. Barbour made you say, from the stability of the Indian medium of exchange, but from the fact that, while that medium of exchange has remained constant, gold in England has risen?—Well, of course you can put it either way. I do not see that there is a great difference in it. Of course, if we could be sure that the bimetallist's theory of putting silver up 30 per cent. would at the same time raise prices in the consuming countries, the countries that consume Indian produce, 30 per cent., then I could not see much harm as regards the Indian producer in such a measure, but I do not believe that the effect of a bimetallist arrangement, under which you increase your currency by giving silver the relative value of 15½ to 1, would raise prices here 30 per cent. I do not think it would do it.

2101. (*Mr. Barbour.*) Do you think it would have any effect at all in raising prices here?—I think that it would have some effect.

2102. Do you think it would have any effect in lowering prices in India?—You mean of prices generally?

2103. The prices of articles exported from India?—Well, of course, if you raised the value of silver 30 per cent., and the prices here do not rise 30 per cent., then the prices in India must go down and adjust the rise in silver.

2104. That is to say, supposing the trade depends on the natural facilities for production of the two countries, and not upon the ratio of exchange, if the exchange alters, that alteration will not stop trade. The prices in the two countries will adjust themselves to the altered rate of exchange, will they not? They may be higher in one country and lower in another, but they will adjust themselves, and trade will go on?—They will adjust themselves in time, no doubt, but there would be a long period of depression among agriculturists, I think, after it, if you were to raise the exchange 30 per cent.

2105. Is it not a question of there being a disturbance for a time; suppose, for instance, we woke up to-morrow and found the rate of exchange was 2*s.* for the rupee, I suppose, at the present price, no wheat would come from India?—I do not think it could.

2106. The result would be that traders would know that no wheat was coming or likely to come next year from India, and I suppose that would put the price of wheat up?—Well, I do not know. America seems practically able to grow any quantity.

2107. Do you not think that to reduce the available supply of wheat by 1,000,000 tons next year would have an effect on the English wheat market?—It might have an effect on the wheat market. If you were to handicap India in that way, I think America would have her opportunity. One thing you must take into account is that America can lay her wheat down much more cheaply here. Her sea freight from the northern ports is almost a bagatelle compared with India.

2108. Do you not think that to reduce the export of wheat from India by 1,000,000 tons next year would have an effect on the English wheat market?—It might have a temporary effect, but I think America would come out so largely to secure the advantage that it would not be much. America would immediately produce more.

2109. Don't you think, if it was known in India that there would be no demand for wheat next year for export, that the price of wheat would fall?—I think it would fall to such a price that it would not pay to grow it, just as it was in some districts before you had the railways.

2110. Don't you think it would come to this in the end, that the price would rise somewhat in England, and the price would fall somewhat in India, and the trade would accommodate itself to the new rate of exchange?—The price would fall somewhat there, and the price would rise somewhat here. Looking to the general position of the cultivators in India, and the small amount left per acre to pay for the railway advantages, a fall in price would be a great calamity.

2111. But still trade would adjust itself to these conditions?—It would in time, but I believe for the time being you would check your export considerably.

2112. But India would have to pay for her imports, and would do so by her exports?—If you check your exports you probably check your imports too. If a country became to a certain extent, or considerably, depressed, naturally you would not buy so much.

2113. But the real wealth of the country would not be reduced by an alteration in the rate of exchange. There would be as much wheat as before; it is only a question of its price?—If you checked the cultivation there would be less.

2114. But the cultivators would not check the cultivation of wheat unless they could grow something else that was more profitable?—But is it not a fact that in some districts where they have no railways they could at times not sell the wheat for the amount of land assessment?

2115. Was not that because there was no means of carriage?—Well, if you reduce the wheat value of the rupee 10 or 15 per cent. by raising the rate of exchange against him, is it not possible he might have nothing left after he paid his Government taxes?

2116. If prices fell very low in India it would be an evil to the producer. Supposing prices fell 30 per cent. in India?—Supposing silver rose 30 per cent. and the effect was to raise gold prices 10 per cent. here, well, exporters would have to stop business until the Indian producer reduced his price by 20 per cent.

2117. You think a fall of 20, 15, or 10 per cent. in India would be a great evil?—Well, looking to the low price of produce at present, from all I have heard about the ryot's poverty, if you had another fall of, say, 20 per cent., I should say that it would be a very great evil.

2118. And I suppose you look upon a fall of price in England also as a great evil?—Well, to the cultivator or producer certainly. In India they are all cultivators. In England it is a small proportion of the population. What you want is cheap food for the manufacturing classes. Probably in India you have 250,000,000 of agriculturists to feed.

2119. There is a certain number of day labourers and others who have no land in India?—I suppose there are a good many, no doubt.

2120. Cheap food is a good thing for them?—Yes, it is a good thing for them, but most of the people live by agriculture, and I suppose that the labourers on the agricultural estates are paid to a certain extent in kind.

2121. And as far as the cultivators consume the food which they produce themselves, it makes no difference to them what the price may be. They

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produce the food and they consume it, and do not sell it?—If they do not produce enough, or if what they produce won't sell, they would not be able to pay their land assessment.

2122. But the person who purchased and consumed the food would get it so much cheaper?—As they are mostly employed by the agriculturist, they would probably very soon get smaller wages.

2123. (*Mr. Courtney.*) I wish to ask you about this question,—the effect on the trade in India about which we have had some discussion. What is the effect of the reduction of the value of the rupee relatively to the gold? I suppose you import from India into England, do you not?—Well, that is our principal trade, shipping from India. We do both importing and exporting.

2124. And you have persons who are buying up throughout India?—Yes, we have branches in the interior.

2125. Suppose there is a disturbance in the relative value of gold and silver in England, so that the value of the rupee falls. You know at that time the price, say, of wheat in the London market which is measured in gold; you know what has been the price of wheat in India which is measured in rupees. Would the effect of that change be to enable you to send out orders to your buyers to buy?—We look from day to day at the price we can get for the produce in the currency of the country in which we sell it. We have every day fluctuations in the rupee price, the rate of exchange, and the rate of freight, and as the whole thing is worked by telegram, of course we practically stop operations, if the margin is against us, until some one of the three things gives way; and if, on the other hand, there is a fall in exchange, the business we may have in hand is facilitated. Probably, we know we can sell at certain sterling prices, and we are all anxious to get hold of the stuff and make something out of it. Therefore, when exchange falls suddenly, we exporters are willing to pay more money at once for produce.

2126. In fact, that alteration of the margin at once develops in you a desire to buy?—Yes, we all rush in to try to get the produce to make a margin out of it at once.

2127. So that, for the moment, the effect is that your buyers are going in, and the increased demand is produced?—Yes, all European buyers are.

2128. And, so far at least, there is a momentary increase of trade?—Yes, an instantaneous one.

2129. With probable consequence of the rise of the article produced by the ryot?—Yes, immediate.

2130. So that the ryot obtains more for his wheat than he did before?—Yes, so long as the gold price remains the same.

2131. But the effect of the decline in the exchange is to give the ryot a greater price in rupees for his wheat?—Instantaneously. As an example I may just tell you this. You know the exchange market in Bombay and Calcutta is like the stock market. It fluctuates almost from hour to hour, and if, after the banks are open at Bombay, a broker comes in and says, "I can sell bills for you at a reduction of one "per cent.," the first thing merchants do is to telephone down to the markets to their men to buy, if they have any business in hand that will pay at the lower exchange.

2132. Let us confine our attention to the ryot. He gets his increased price for his produce What are his outgoings?—First of all there is his land tax.

2133. Is that affected by the amount that he gets?—No.

2134. So that so far he would get a benefit?—He would get a benefit in another way. If you look at Mr. O'Conor's statement you will find that railway charges which are payable in rupees have not risen but fallen lately. Let me say, to show you what they are, at the time he wrote that minute, taking wheat sent from Cawnpore to Bombay, 19½ per cent. of the price in Calcutta was railway carriage, from Delhi 16⅛ per cent., Jabalpur 14½ per cent., so you may say that 15 or 20 per cent. of the price of wheat in Calcutta is railway charge, and that is invariable, or at any rate does not rise with falling exchange.

2135. And the rent is an invariable item?—I think where they have no permanent settlement they adjust them at intervals every 30 years.

2136. For present purposes it is invariable?—It is invariable for the time being.

2137. What are his other outgoings?—I do not know whether he has much besides his food.

2138. (*Mr. Birch.*) He produces, however, all his own food?—He buys little of imported articles. Probably the only thing he buys is a little cloth, a few brass vessels, and a little silver.

2139. (*Mr. Courtney.*) The only alteration of his disbursements would be with respect to the imported articles, which would be a very small share of his expenditure?—Yes.

2140. And he would have a greater balance of rupees in his hand?—Yes.

2141. Is not the mere possession of silver an object of desire on the part of the Indian peasant?—Silver rupees to him are the actual possession of wealth.

2142. But not merely as means of exchange, but as things to hold and possess?—They like gold ornaments as well.

2143. But at all events these precious ornaments are objects of desire?—Yes.

2144. And the effect of the fall in the exchange in London is to enable the ryot to get a larger balance of rupees in his hand after the settlement of all charges, a greater satisfaction of his desires in that respect whether foolish or wise?—Yes.

2145. Mr. Barbour talked to you about goods being paid by goods. Is it not the fact that a large quantity of the goods which come from India to England are not repaid with goods but by precious metals?—Yes. I drew that distinction. I said that the shipment of goods was repaid by goods up to where the amounts were equalised, but the balance was paid in the precious metals.

2146. And so far only there would not be anything to set off against the gain from the better price of wheat, if we still confine our attention to wheat. So far as the balance is paid in coin that is a realised balance which does not pass away?—No, that is in his possession.

2147. Now, suppose another hypothesis, that, through changes in production in the United Kingdom, the exported articles are undergoing a natural diminution of price just sufficient to counterbalance the loss in exchange, in that case those articles put on the Indian market would practically be unaltered in price?—Yes, if the two things balanced they would be perfectly unaltered.

2148. Have you any reason to believe that something of that kind has been going on, that with respect to exported articles there has been a gradual diminution in price owing to the development and the greater cheapness of production?—As matter of fact the fall in values here has been on the whole, perhaps, greater than the fall in exchange, and consequently these imported articles are, on the whole, even cheaper than they were before. I think that is the case with Manchester goods at any rate.

2149. So far, at all events, the ryot, whose case we are considering, has got all gain and no loss?—Yes, up to to this point that is so

2150. But the situation of India, apart from that of the Indian Government, would, in respect of this matter, be that of an aggregation of ryots?—Yes, they all gain on the balance undoubtedly.

2151. And who loses in India apart from the Indian Government?—I do not see that anybody loses in India apart from the Indian Government, and I do not think that Government lose. Their increased revenue, owing to the greater prosperity and increased railway receipts, counterbalances any loss they have in remitting against their gold liabilities.

2152. And that process of gain has been going on step by step?—Yes.

2153. And suppose the thing went on further; suppose the rupee still further declined, would you not be able to realise the same prospect of gain at each stage?—Yes, at first sight it would appear so.

2154. It may be inconvenient for the Indian Government, but not for the Indian ryot?—For the Indian ryot, I do not see, speaking off-hand, that there could be anything detrimental to his interests in the matter.

2155. If you put it in this simple way, what the Indian ryot wants is silver. If silver is cheaper, his position is improved?—Yes. Of course the time would come when the prices generally would, to a certain extent, adjust themselves.

2156. But does not that depend upon the development of commercial ideas on the part of the Indian ryot?—As regards his land tax in districts where they have not a permament settlement, I suppose, if the ryot were found to be very prosperous in the matter of possession of silver, the Government at the next settlement would raise his tax.

2157. And if the ryot took to banking, or investing his savings in trade, probably prices would be very rapidly affected; but, supposing he practically hoards his balance, would there be anything then to cause a rapid readjustment of prices?—Perhaps not rapid; but if we had a continued further fall, I think there must be a tendency to adjustment in the long run. I do not say that it has not been very long in coming about, and there are not many signs of it at present, but in time it is difficult to believe that there would not be a readjustment.

2158. You were asked some questions about the supposed adverse effects; first of all of a reduction of prices through development, or the cheapening of production, and next an enhancement of prices through an alteration in the value of the medium of exchange. Are you aware that during the long period from the end of the great war in 1815 down to, say, 1850, there was on the whole a continuous reduction in the prices of articles produced in Great Britain?—Yes, I have seen that in different works on the subject.

2159. And if there had not been, about 1850 and thereafter, a disturbing cause, the same cheapening of production which was practically going on would have produced a continuous decline of prices?—From all I have read and heard, it appears to me that if it had not been for gold discoveries there would have been probably a continued decline, or at any rate no rise.

2160. Don't you think that it has counteracted, to some extent, the alteration of prices caused by the gold discovery; that if it had not been for that continuous cheapening of production, the effect of the gold discoveries would have been to send up prices higher than they did?—I think so.

2161. So that it still worked on, that cheap production?—I think that the influence of cheapness of production and transit have been very great indeed, and must continue.

2162. And the nation has derived benefit, as a whole, from it?—Undoubtedly.

2163. Did the nation derive benefit, as a whole, by being the recipient of cheaper gold from Australia, and practically acting as the merchant in it, and sending it to other countries in the world? In this country we received the gold, to a large extent, from Australia and California, where it was produced with less labour than before. It did not remain here. We took it, and went, to a large extent, as merchants, to the Continent and elsewhere, with a great portion of it. Do you think that was a profitable transaction to us?—You mean used it by manufactures.

2164. To buy raw materials to a large extent, and the agricultural products?—Well, I should think it was, certainly.

2165. Is there any reason why you should doubt the possibility of our having derived benefit from both sets of causes, although they practically worked in different directions, the cheapening of prices and the discovery of gold?—I think we did derive benefit from the two.

2166. About the possibility of fixing the ratio, of fixing the relations between gold and silver at the present market ratio, you have no great objection to that?—I do not say that I have any great objection to it. It is a matter to which I have not given very much thought, therefore I should like to reserve my expression of judgment in respect of it, but I may repeat what I said before that of course the objections to fixing it at 15½ to 1 would not, to a great extent, apply to the fixing of it at the present ratio.

2167. Are you aware that in 1850 there was great anxiety on the part of persons of the highest authority as to what would be the effect of the depreciation of gold?—Yes, I believe it is a fact. In fact, a friend of mine told me that he knew that it was stipulated by landlords that they might demand payment of rent in silver. Chevalier and Cobden were very much alarmed about it. I know that that anxiety existed.

2168. Supposing that state of things were left alone, and there should be a cheapening of gold again, so that by natural causes the rupee should mount from 1*s.* 6*d.* to 2*s.*, do you think it would be desirable now to fix it at 1*s.* 6*d.* if we could do so by legislation?—I do not think so from that point of view.

2169. You prevent the only attraction to a natural return?—Precisely.

2170. (*Mr. Birch.*) I understood you to say that, in your opinion, gold has not materially appreciated as against commodities, but rather that production has increased, and consequently commodities have been selling at lower prices?—Not quite that. I think that the greater portion of the depreciation in the price of commodities is not due to gold.

2171. And consequently, except for the benefit of exchanges, India might have had difficulty in competing with other countries?—I think so.

2172. You said that the variation in exchange had affected the price of cotton at a certain period?—Yes.

2173. That prices in India, as a rule, will always vary with the exchange, as they do with other charges?—Certainly.

2174. Exchange is part of your element of charge?—Precisely as freight and other charges.

2175. Violent fluctuations in exchange only affect the grower in that, unless prices in the growing country vary, he receives as much rupees for his produce. The question of exchange is simply an element in the merchant's calculation?—Yes, that is all.

2176. A fall in the price of wheat here would have the same effect as a rise in the exchange?—Yes, precisely the same thing.

2177. And India has derived a great benefit from the fall in the price of silver?—That is my very strong opinion.

2178. Following your argument with regard to the Indian budget and exchange, it really tends to show that India is in the same position as Italy or any other country which borrows money in England and has to remit the interest at varying exchanges, and consequently has to arrange her estimates on an uncertain basis?—Certainly.

2179. (*Mr. Cohen.*) You spoke of America interfering to prevent the fall of the rupee to 1*s.*?—Yes.

2180. Then you contemplate that it should be within the power of legislation to arrest the movement of silver?—I think as to the power there is no doubt whatever. If you could get the leading countries of Europe and America to agree to a bimetallic arrangement you would, at any rate for a time, have great stability.

2181. It would be an advantage, you think?—I do not say it would be an advantage, but I say it would have the effect of arresting the decline in silver. I do not wish to express an opinion on that point without giving it more thought, but as to the power, I have no doubt whatever they could do it.

2182. I think you said that it would be an evil for the rupee to go down to 1*s.*, and you think that America would arrest that?—No, I did not say that.

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I said that at first sight the advantages of the fall to 1*s.* 6*d.* would be increased by a fall to 1*s.*, and that it required, of course, some thought to say what the final result of it all would be.

2183. What I want to get at is, whether in your opinion there is a state of things possible or probable in which the interposition of the Governments should be invoked?—Well, I am not prepared to say that I should be inclined to advocate that our Government should go into a bimetallic arrangement now on any basis, but I am certainly opposed to it on a basis which would raise the value of silver materially. I would not like to express an opinion in favour of it on any basis.

2184. (*Sir T. Farrer.*) You said just now that the ryot was getting more silver. Where would that silver come from? You would expect on any fall of exchange of this sort to see a great import of silver?—There was a large increase in the import of silver last year, but they were taking a good deal of gold for two or three years before that, because the native likes gold ornaments, of course.

2185. But would it not throw some difficulty in the way of the position if you were to say that last year, when there was the largest fall in exchange that we have ever had, there was a very great diminution in the export of silver to India?—There was an increase last year again, I think; in the latter portion of the year the tide turned again.

2186. From the trade and navigation returns in 1884, it appears that the export of silver to India was 7½ millions, in 1885 it was 7,100,000*l.*, and in 1886, the year of the great fall in exchange, it was less than 5,000,000*l.*?—I would just like to say with regard to that point, that probably that is only a temporary thing, and may be accounted for by the curious fact that the imports of merchandise into India during the eight months ending November, the first eight months of the Government of India year 1886–7, have increased 14 per cent.

2187. I will give you the facts for the whole year. The exports from this country to India increased by 2,000,000*l.* in 1886 over 1885?—Yes. I heard you say that, but the curious part of it is this, that you see Mr. O'Conor, in that statement made up to the end of the financial year, the 31st March 1886, pointed out that there was no expansion, while with the following year, beginning the 1st of April last, there was immediately an expansion both in exports and in imports. The figures, I believe I am right in speaking from memory, were for the first eight months an increase of 14 per cent. in imports and 8 per cent. in exports, so that just for that time India was taking more merchandise than silver.

2188. So that during that period, the earlier part of the year, when there was the greatest fall in exchange, the increase was not in exports to India, but imports into India?—Yes, it is a very curious thing.

2189. It is a very curious thing on your theory. I would like to ask you this further question, whether if a fall of exchange stimulates exports from India in the way in which you mentioned a fall in exchange ought not to check exports from this country to India?—No, it does not.

2190. How is it? Surely it is merely the reverse operation. A fall in exchange prevents a merchant getting as many rupees for his gold. It gives to the Indian exporter more rupees for a given quantity of gold; it gives to the English manufacturer a smaller quantity of gold for the same number of rupees. Ought it not to have the reverse effect?—I think that the prosperity of India has been increased by this fall in silver, and that therefore the country seems better able to buy the Manchester goods. That is the only explanation I can give of it. At the same time, if you take a series of years instead of merely one year, you will find that when the exchange has been falling, India has been taking more bullion.

The witness withdrew.

Adjourned till Friday, February 11th.

Tenth Day.

Friday, 11th February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR.
MR. J. W. BIRCH.
MR. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, BART., M.P.

MR. GEO. H. MURRAY, *Secretary.*

MR. J. TALBOYS WHEELER was examined.

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2191. (*Chairman.*) You have come before us to represent the grievances of the uncovenanted Indian Civil servants, have you not?—Just so.

2192. Are you yourself an uncovenanted Civil servant?—Well, I found that I was; I never thought that I should be treated as one.

2193. And you represent them?—Yes, I represent them.

2194. Is there an association?—There is a committee formed.

2195. And you come here on behalf of that committee?—Well, I cannot say that, because I have not communicated with the committee at all, but as I was appointed chairman, I suppose I represent the committee.

2196 But I suppose you are intimately connected with the case which the committee wish to lay before this Commission?—Intimately.

2197. Could you state to the Commission precisely in what you consider the grievance consists?—In entailing a loss of 25 per cent. upon all pensions and furlough pay paid in Europe.

2198. But the Indian Government of course profess that they fulfil strictly the bargain that they entered into with the uncovenanted Civil servants when these servants entered their service?—That was at a time when no one dreamed that there would be any fall in the rupee; and not only that, but when the rupee rose above par the Government of India proposed to keep back the surplus.

2199. How long was the rupee above par?—It was above par in 1865; about 2*s.* 2*d.* or 2*s.* 3*d.*

2200. Did that rate of exchange last for more than a few weeks?—I really could not say that, but it was always fixed in all our minds that the rupee was 2*s.* or a little above it or below it, and had been so from time immemorial.

2201. The rules were laid down in the year 1863, were they not?—Yes.

2202. I have before me a table here which professes to give the rates of exchange between England and India between 1837 and the present year, and I notice that 1861, which is two years before the period in which the rules were fixed, was the last year in which the exchange ruled above 2*s.*?—That is to be explained in this way. I am speaking of sending money home by the commercial rates of exchange, and that was the Treasury rate of exchange.

2203. But still, according to the paper I have before me, the commercial rate in the year 1863, the average of the year, was 1*s.* 11*d.* and a fraction, and at that point it remained till 1870, and from 1870 to 1875 it was about 1*s.* 10*d.* and a fraction, and subsequent to that it has always been below 1*s.* 10*d.*?—I can only say that I sent money home in 1865 at considerably over 2*s.*

2204. But was there not an accidental oscillation of the money market which enabled you to do that?—That I cannot tell you, because I was strictly in an official position. I was Assistant Secretary in the Foreign Office in Calcutta.

2205. The figures I have given are, of course, the average figures for the whole year?—There may have been some fluctuations of that kind.

2206. So that, as far as would appear, the Indian Government never can have had occasion to say that the rupee would not count for more than 2*s.*?—They did so, because there is a note kept in the uncovenanted Civil servants' rules that the rupee was not to be more than 2*s.*

2207. Is there also a rule that it is not to be below 2*s.*?—No.

2208. Well then, the Indian Government, in the original contract which they made with the uncovenanted Civil servants, evidently thought it might rise above 2*s.*, and provided against it, but did not contemplate that any grievance would arise if it went below 2*s.*?—No grievance arose when it kept about 1*s.* 11*d.*, or thereabouts, but now that it has come down to 1*s.* 6*d.* the grievance is most grievously felt.

2209. But there is no breach of contract?—No, but it is a hard bond.

2210. In other words, if the Indian Civil servants could have foreseen that the exchange would fall to 1*s.* 6*d.*, and if the Indian Government could have foreseen it, they would probably have introduced a rule that the rupee was not to count below a certain rate of exchange?—I cannot tell you what the financial departments of the Government of India would have done.

2211. Would they have found a difficulty had this been foreseen in getting gentlemen to enter their service?—All this arose from a matter of policy, to equalise the Asiatics and Europeans who did not belong to the covenanted service. It was laid down in 1863 that Asiatics and Europeans were to be treated alike; that in future, appointments in the uncovenanted Civil Service would as far as possible be given to Asiatics. Of course that was impossible in many cases, as many of these appointments were scientific. I was Professor of moral philosophy and logic in the Madras College, then Assistant Secretary to the Government of India in the Foreign Office, and afterwards Secretary to the Government of British Burmah. I never contemplated having a pension, which would be wealth to an Asiatic, but poverty to the European.

2212. (*Mr. Birch.*) Was your contract for English currency or rupees?—I had no contract whatever. I trusted entirely to the liberality of the Indian Government. I never dreamed of getting such a small pension as I have got now.

2213. (*Mr. Fremantle.*) You accepted a post at so many rupees a month?—I accepted a post when there were no furlough rules at all, but pensions were on half pay. There were no rules till 1863, when I had been in the service five years.

2214. (*Mr. Barbour.*) You understood the salary would be paid in rupees?—I never troubled about the matter for a moment.

2215. Did you take it for granted at that time that 10 rupees were equivalent to 1*l.* sterling?—That was the view.

2216. You did not question the fact?—I knew nothing about pensions; in fact, I never knew till I was about to retire that I was to get so small a pension.

2217. (*Chairman.*) Your complaint against the Government is not that they have broken their contract, but that they have proved ungenerous employers?—Yes; hard and strict, like Shylock's bond.

2218. Now come to the exact material loss to the uncovenanted Civil servant. I understand that in India, so far as the pension is spent in India, no loss occurs, because silver has not fallen materially?—No, it has not fallen materially. I have heard recent arrivals say that wages had risen, but I have heard that complaint for many years past, in fact ever since I went to India—it started with the Mutiny—the general complaint was that wages were rising. That is the only thing in which I have heard that there is any difference.

2219. So that the material difference arises when the pension is paid in England?—The pension and furlough pay which are paid in England.

2220. Is it not the fact that prices have fallen to the same degree as silver has fallen?—I could not tell you. I was 20 years in India, and I found everything very expensive when I came home.

2221. If it be true that prices in England have fallen in the same proportion as the rupee has fallen, there is no material loss?—All I can say is that when I was a young man a five pound note went a great deal further than it does now.

2222. (*Mr. Barbour.*) I think that what are called uncovenanted pensions were originally payable in rupees in India, and not payable in England at all?—The rise of the uncovenanted service was an anomaly. The covenanted Civil servants were nominated by the directors of the East India Company in England, and came out to India and did all the work of clerks and writers in public offices. When we founded an empire all these civil servants were turned into magistrates, collectors of revenue, and judges. They did not do the work they did formerly, and it was made over to a new class of men, mostly East Indians of mixed European and Asiatic descent, and these were called uncovenanted, so that for many years the term uncovenanted was a term of reproach. When I came out to India, the rule was that your pension was to be half-pay after a certain number of years' service, but we all expected that some new rules would come out which would specially apply to our case. First of all, in 1855, there was a stipulation that this half-pay should not exceed 300*l.* for 15 years' service, or 500*l.* a year for 25 years' service, and then in 1863 came out these rules, which are fixed here, that the pension should be 3,000 rupees for 15 years' service, and 5,000 rupees or 25 years' service.

2223. But my question is this: is it not the fact that all these pensions were formerly payable in India in rupees, and not payable in England at all?—But to a totally different class of men.

2224. But to all men who drew their pensions in rupees, they were paid in India and not in England?—I believe that was the case, but the old uncovenanted servants were mostly born and bred in India, and never went to England. We of the new service were all expecting fresh rules, because when the Education Department was formed no furlough rules were in force. If an officer was ordered to England on medical certificate he took half-pay and gave half-pay to the man who succeeded him and did his work for him. If an officer retired on a pension and went to England, it was considered a special case, and the Government gave him what they thought proper.

2225. Did not the Government of India subsequently pass an order, as a concession, that men whose pensions were payable in rupees might draw them in England?

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—It was no concession, excepting as a matter of convenience.

2226. To the officers?—I think not.

2227. You are entitled to a certain pension, payable in rupees?—Yes.

2228. And you find that as the rupee goes down you get fewer pounds sterling every year in England. That is your grievance?—That requires some explanation. Certainly, when I went into the service I did not expect that I should retire on such a pension as I now receive, whether in rupees or pounds sterling.

2229. Your pension payable in pounds sterling is reduced year by year?—It keeps on fluctuating, and always gets less.

Witness withdrew.

Mr. ROBERT BARCLAY was examined.

Mr. R. Barclay.

2230. (*Chairman.*) You are a Manchester merchant, are you not?—Yes.

2231. Engaged in the trade with India and the East?—India and the East, and also South America, with the River Plate.

2232. Entirely with the silver-using countries?—No, I would not call the Plate a silver-using country at all now. So far as this matter is concerned, I do not think it could throw any light upon the question just now.

2233. Your chief transactions are with India?—With India in connection with this question, but I have had long experience with currencies in the River Plate trade, which has helped to throw a side light.

2234. Are you an exporter from India, or an importer into India?—An exporter to India of Manchester goods.

2235. Do you import from India?—Not at all. I may say that I have followed the course of silver for the last 20 years in connection with the River Plate trade. There we had silver as a remittance from our dealers, and it was my duty to watch the course of silver, because we often took it from our dealers as a commodity.

2236. Are you of opinion that those engaged in your trade have suffered from the fluctuations of exchange?—Yes, very materially.

2237. Could you explain the exact mode in which the fluctuations of exchange have injured you?—Of course merchants require to look out for themselves, and can adapt themselves to any class of circumstances, and the course of things has been such that the Manchester merchant in the Indian trade has now become practically an intermediary between the native dealer on the one hand and the manufacturer on the other.

2238. He no longer makes speculative purchases?—He does so to a certain extent, but he has always the idea of covering himself by sale and exchange contracts.

2239. On the whole does he succeed?—He has been succeeding better of late.

2240. Is there a speculative element in your trade, for instance?—There is always to some extent, and must be. A house going on with regular trade will see it to be an advantage sometimes to secure goods in anticipation of orders.

2241. But in the great bulk of your transactions you secure yourself against any speculative loss?—As much as we can.

2242. And on the whole you succeed?—Yes; and without violent fluctuations no doubt we would succeed.

2243. It is only possible for the merchant to cover himself when all the parties to a contract fulfil their obligations?—Yes, because there are so many repudiations and dangers to which we are exposed.

2244. So that the safeguards are more theoretical than practical?—Yes.

2245. They break down because people with whom you contract do not fulfil their contracts?—Yes; and the Exchange Banks sometimes suddenly decline to make forward contracts, or will only do so at rates lower than had been counted on. Any one acquainted with the Manchester market can testify that business there is always checked when a fall in silver takes place, and that Manchester prices have generally ultimately to give way. Gold prices have had in the main to conform to silver values in our trade with the East, not silver prices to gold values. Something like the principle of gravity which we find in the physical world comes into play in the matter, and the *vis inertiæ* of the one centre of valuation defies the power of the other. The quantity of silver in use throughout the East is immense, say at least 400,000,000*l.*; and the fact that this silver money, and the silver ornaments which are akin to it, are actually in the hands of the myriads who use the silver valuation gives a potentiality to silver valuations there, which enable them to hold their own against the gold valuations of Europe. Dealers won't pay more in rupees until there is some sign that supplies will be affected. As markets are generally fully supplied, and as our Lancashire mills cannot at once check their production, advances necessary from a fall in rupee exchange can rarely be got, and English prices have had as a rule to go down to conform to their altered silver equivalence.

2246. Would you explain to the Commission more definitely what you mean by gold prices conforming to silver values in our Eastern trade?—That is when a fall in prices takes place in India. I am speaking now of the fall in prices from a lower value of silver.

2247. The fall of the price of silver in India?—When that takes place the same price of course cannot be paid in Manchester. A lower price in sterling must be obtained, if transactions are to go through.

2248. By the exporter?—By the exporter. A fall in silver makes the relation of the two currencies different, and in order that a transaction may go through the Manchester manufacturer must accept a lower price.

2249. In other words, if you cannot get as much in the country to which you export for the goods which you export, you must buy them cheaper in the country from which you export?—Exactly.

2250. But that I think is obvious, is it not, if you are to make a profit?—Of course; yes.

2251. (*Mr. Birch.*) When you speak of a lower price, what market do you refer to?—A lower price in England. Some people are apt to regard silver, in viewing it in connection with English prices, very much as they regard paper money. Paper money must conform, and will immediately conform, or very quickly to the variations in the gold premium in any country; that is the paper price rises, but silver on the whole is in a totally different position. Silver is a centre of value.

2252. (*Mr. Chamberlain.*) Your point is this, is it not—that if the value of silver falls in England, an Indian purchaser will not give more silver for your goods, and consequently you have to take the same amount of silver, although that is worth less gold?—Practically.

2253. Therefore you have to accept a lower price in proportion to the lower value of silver?—Yes. I hold that people cherish the belief that silver prices must yield to gold prices, from a wrong conception of the power that silver prices still have in the world.

2254. (*Chairman.*) I do not precisely understand what silver prices yielding to gold prices means?—We have been so much accustomed to regard silver as the inferior metal, and to think of gold in the monetary system as an element whose superior gravity, so to speak, must necessarily control the power of silver, that we do not give due weight to the fact that they

are still, in the main, co-ordinate powers. The demonetisation of silver in Europe, while it has altered the relation of the two metals where they came into contact, has not affected the power of silver money over the vast areas and among the countless myriads of the East, where silver alone is the sole standard of value, and where there is no contact with gold valuations. The two metals are like two orbs moving in different planes, and while the rending of the tie of the bi-metallic ratio which kept their relative power in Europe steady has led to dislocation of the two valuations there, silver in its own sphere, where it alone is supreme as money, remains unaffected by what has happened.

2255. Perhaps your point would be brought out more clearly before the Commission if you would tell us what difference you think the fact that India uses silver makes. Supposing instead of the 400,000,000*l.* of silver in currency through the East you had 400,000,000*l.* of paper in currency, would there be any difference according to your view?—A very great difference, because silver is the money throughout these enormous areas, and paper, owing to the character of the people and their habits in hoarding money, could never take the place of silver.

2256. I am assuming that the paper would be convertible?—Among these Eastern races every person knows silver, handles it, and there is no contact with gold. Although we talk of the gold price and the silver price in this country, a native in India or in the East never knows that difference.

2257. It is merely the fact that we are dealing with a huge mass of currency permeating very numerous and small channels over an enormous area, with a very conservative population, that is the cause of the stability of prices in the East; it has nothing to do with the fact that the currency is silver?—Yes; and further, that India is not an exporter of silver. She is simply a receiver of silver. She is always able to receive it. Of course what would bring down paper money is that it may be issued in any quantity, and its value would at once be determined by its lower exchange powers with regard to Europe; but with regard to silver, it is the centre and basis of valuation. India never exports silver.

2258–9. (*Mr. Barbour.*) Is it the fact that prices do not change in the East?—That is a wrong assumption. I would not wish that to be drawn at all. I refer to variations in price through exchange differences.

2260. (*Chairman.*) Let us put it in this way. There is a great deal more friction to be got over before there is a change in India than there is in England?—Precisely; that is what I mean.

2261. I want to get more specifically the precise loss which occurs to merchants in Manchester from the variations in exchange. I want to know whether it is owing to the doubt which is thrown over those transactions, or whether to any other cause?—I have explained to you the position which the merchant now occupies. The merchant, as I have said, tries to keep himself clear of exchange risk in his transactions.

2262. And on the whole succeeds?—On the whole succeeds. The real merchant is the native dealer, who keeps the English merchant rigorously to his contract in the matter of time and everything else. The merchant in turn holds the manufacturer equally firmly bound, and if he fails in the matter of time, also holding him liable for loss in exchange which this may involve.

2263. Can you adduce proof of that?—Yes.

2264. We had it in evidence from another witness that the manufacturer was equally able to hold himself free of loss from exchange as the merchant?—I have here a memorandum on this point from an important cloth agent in Manchester. He says, "The "necessity for the prudent merchant to fix his rate of "exchange along with the purchase of goods, and "thus be put to the labour and expense of two transactions where one used to suffice, are notorious, but "recently these difficulties have become aggravated "by new difficulties, arising from the nature of the "case, where any breach of contract occurs through "violent oscillations, such as those of last year, and "the merchant endeavours to transfer his loss to the "defaulting manufacturer. Breaches of contract may "be *wilful*, or may arise from miscalculation of time "on the part of the manufacturer; from unexpected "difficulties in the process of manufacturing *new* "*styles* of goods; from strikes of various kinds; from "breakdowns of machinery, and many other *unavoid-*"*able* causes. The merchant, being unable to fulfil "his exchange contract, has to pay his bankers the "differences, and seeks to recoup himself from the "manufacturer. Generally such claims end in com-"promise, and in our own business (turning over about "500,000*l.* per annum) we have allowed on such *com-*"*promises* during the last 5 months 565*l.*, all from "unavoidable causes. In addition, a Bombay indentor "of 15,000 pcs. shirtings (which goods our manu-"facturers' weavers refused to make, and twice "struck against) claims to have lost 400*l.* on his "exchange contract, which claim we resisted. At "this moment we have three claims respectively of "30*l.*, 50*l.*, and 90*l.* = 170*l.*, from a new cause. "Goods are *unavoidably* late—exchange has risen—"rupee prices have fallen—the Indian indentor will "only accept the goods at the lower rupee prices; the "merchant has to fulfil his exchange contract at the "lower rate, and hence these losses, which *somebody* "will have to bear, and the market is full of such "claims, which will probably end in some big law "suits."

2265. A Bombay indentor, what is that?—That is a native dealer sending an order to England.

2266. The loss mentioned there is 170*l.*, out of total transactions of 500,000*l.*, is it not?—He says within the last five months he has paid 565*l.*, and he has claims at the present moment for losses equal to 170*l.*

2267. Am I wrong in saying that the 565*l.* arose from other causes than variations in exchange?—There would probably have been no claims in the instances referred to but for the variation in exchange.

2268. Surely you mentioned breakdown of machinery, alteration of patterns, &c.?—The manufacturer is liable to all these dangers. Manufacturers work with very small capital, and they cannot afford to have too big a margin in time for the delivery of goods. Some of them have no warehouses to store them, and believing they can have the goods delivered to their agents at the proper time, they make the contracts and these things occur.

2269. And it is due to the alteration of exchange in the course of time?—It is entirely due to the fluctuations of exchange that they entail loss.

2270. (*Mr. Birch.*) Is it not customary to have a fine on a manufacturer not delivering goods up to time?—In the course of business there is a good deal of give and take in regard to ordinary business of this nature, but this is a new element, altogether apart from others that might arise. Merchants have to be considerate with their manufacturers, and as a rule they are so when this exchange difference does not occur. It is a thing that arises purely from violent exchange fluctuations, and you see it affects them both ways, whether exchange falls or rises. Even a single day's delay may lead to repudiation by the indentor and the consequent losses referred to.

2271. (*Chairman.*) I quite understand the nature of the loss to the merchant. I now should like to know something about the magnitude of it. The transactions of the firm whose business you have described to us amount to about half a million a year, and the only losses of which they take note from fluctuations of exchange are in all about 700*l.*, are they not?—And another claim he has resisted of 400*l.*

2272. So that altogether it is about 1,000*l.*; within what period?—Within five months he speaks of; but then you must remember he is not a merchant; he is a grey cloth agent, passing goods through his hands for a very bare commission.

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2273. Is he the intermediary between the manufacturer and the merchant?—Yes.

2274. (*Mr. Barbour.*) His profit on the turnover of the year would be very small?—Very small; in fact, it is a ruinous thing for an agent, unless he can get it out of his manufacturer.

2275. (*Chairman.*) So you entirely dissent from the opinion given here the other day that the loss by variation of exchange, that falls somewhere upon the trade, can be diverted from one person to another until it reaches the small retail dealer in India. You are of opinion that it falls directly upon the manufacturer?—Not the whole. You see there are difficulties of this nature.

2276. But the greater part of it falls on the manufacturer?—I would not even say that. The differences in exchange, of course, are no doubt obviated very much by the counter transactions.

2277. But the one person that cannot save himself is the manufacturer?—He is the worst on the whole.

2278. The merchant can save himself, but the manufacturer cannot?—Yes.

2279. (*Mr. Houldsworth.*) In the contracts, if the various arrangements are all completed, and in time, there is no loss?—There would be no loss.

2280. (*Chairman.*) But what you have been pointing out is that there are accidents which occur and bring loss?—Yes, very serious loss as any person acquainted with manufacturing knows.

2281. (*Mr. Houldsworth.*) Of course in the ordinary course of business, independent of exchange, there are losses of this sort constantly between the merchant and manufacturer. The merchant fails in time, and a complaint is made?—Yes.

2282. In this case failure of a day causes loss, owing to the difference in exchange, which makes the merchants claim much more than they would under ordinary circumstances?—A new element altogether, a special element.

2283. (*Mr. Barbour.*) Is it the case that this fluctuation in exchange leads to bargains being made on contract for future delivery rather than to immediate transactions?—Yes, it has changed the whole nature of business.

2284. And these contracts are fulfilled after a certain time, and during that time accidents may occur?—Yes. Formerly, the man who sent the goods abroad was really a merchant.

2285. (*Chairman.*) He is now simply a middle man?—He is now a middle man, and tries to keep himself in that position. Of course, the heavy loss from exchange variations is now to a large extent secured by these counter contracts, in which the bankers are the intermediaries; and they, as it were, combine the operations of the exporter of produce from India and the exporter of goods from England. But in spite of all this there are these difficulties that I point to.

2286. Then that exhausts what you have got to tell us with regard to the loss to the English merchant and manufacturer from fluctuations in exchange?—In the mercantile point of view.

2287. Could you now explain to the Commission the effect on the Indian manufacturer and exporter which the low rate of exchange has. I presume that mere fluctuations of exchange injure the Indian not less than the English exporter—mere fluctuations irrespective of whether they are up or down; but I understand you to hold that the Indian exporter benefits by the fact that the exchange has fallen?—Yes.

2288. Would you explain to the Commission exactly how you think that benefit accrues to him?—The main element of production, that is, cotton, is alike to the one and to the other.

2289. You are now confining your attention to the cotton?—Yes, I think I am better to do so. Then when a fall in silver takes place it affects both the buying of the Bombay spinner and the buying of the English manufacturer alike. They are both on a level with regard to that. Very well, the Bombay manufacturer has his wages and all his permanent charges to pay in rupee values. The English manufacturer has all these things to pay in gold values, and therefore when these are rendered into rupee values, in the case of selling against these Bombay mills, he is disadvantaged. There is a statement here which will demonstrate the thing very clearly. It is extracted from a pamphlet on "The Silver Question and the Cotton Trade." "At the end of December 1885, "good Dhollera cotton was purchasable in Bombay at "180 rupees per candy of 784 lbs.; of course this was "alike to the Bombay or Lancashire spinner. On "the same day 20*s.* yarn was selling in Bombay at "6⅜ annas per lb. With exchange at 10 rupees to the "English sovereign, the position of the two producers "would be as follows:—Taking 116 lbs. of cotton to "spin 100 lbs. of 20*s.* yarn—

	s.	*d.*
" 100 lbs. yarn at 6⅜ annas per lb. gives	79	8¼
" 116 lbs. cotton at 180 rupees per candy	53	3¼
" Margin after waste for spinning	26	5

"or rather over 3½*d.* per lb. This, with the rupee at "2*s.*, is alike the margin for the Bombay and Lanca- "shire producer. But the latter has to pay ⅛ of a "penny for all costs in connection with the purchase "and import of his cotton and the export and sale of "his yarn, which would leave him a working margin "of only 2¼*d.* against 3½*d.*, but he could live and "sustain his trade at this difference. Let us try the "same case with the rupee at 1*s.* 6*d.*, the Bombay "spinner still buying his cotton at 180 rupees per "candy and selling his yarn at 6⅜ annas per lb.— "how does it stand with his Lancashire competitor?

	s.	*d.*
" He sells 100 lbs. yarn at 6⅜ annas, " which at 1*s.* 6*d.* the rupee gives him	59	9¼
" He buys 116 lbs. cotton at 180 rupees " of 1*s.* 6*d.* each per candy, which costs	39	11½
" Margin, after waste for Lancashire " spinners - - - - -	19	9¾

"or 2⅜*d.* per lb. Then deduct ⅛*d.* for the cost of "import and export, and we find the Lancashire "spinner of 20*s.* yarn working his mill upon a margin "of 1½*d.* per lb. against the Bombay producer, com- "fortably progressing with an unimpaired margin "of 3½*d.* Can we wonder that spinning in Bombay "is growing and prospering, or express any surprise "at the difficulties about which spinners here com- "plain? Every fall of a penny in the rupee takes a "full eighth of a penny from even this miserable "margin of 1½*d.* per lb. of the English spinners' "margin, while the Bombay spinner is unaffected "by the fall. It is of the highest importance to note "that the case is stronger the further you carry your "industrial operations. Bombay has become aware "of this, and is preparing to erect mills to spin and "weave shirtings from 30's × 30's yarns of Indian "cotton, and a company has been formed to erect "large dyeing and bleaching works, with a view also "to calico printing ultimately." There is thus a difference of ¾*d.* in favour of the Bombay spinner as against the English spinner, on the basis of exchange at 1*s.* 6*d.* per rupee as against 2*s.* per rupee.

2290. Does that arise solely from the fact that all the English manufacturers' costs are paid in gold, which has risen relatively to silver, whereas he is paid himself in silver, which has fallen relatively to gold?—Yes, he pays them in gold and collects them in silver. Of course I am showing how the thing would act at extreme points. No doubt many things have given way under the pressure of the lower price which the manufacturer must accept, but the immediate effect of a fall is such as I have said.

2291. (*Sir T. Farrer.*) You are speaking there of yarns to be sold in India for silver?—In India for silver.

2292. (*Chairman.*) The effect you are speaking

of is a permanent effect, and not one due to a temporary stimulus given by a momentary fall?—No; it tells immediately upon the fall, and remains more or less.

2293. As long as the relative values in the two places remain undiminished?—Yes, and especially wages, the most important element of all, keep up, it always remains.

2294. (*Mr. Houldsworth.*) Would you give us an indication of the adjustment? It seems to me that we should take this into account in estimating the result. It is an imaginary case that you put to us?—Yes.

2295. (*Chairman.*) You mean that there are compensations. Would you mention what they are?—Well, if wages were to give way.

2296. What are the actual compensations?—The articles that he can buy cheaper in consequence of the fall in prices in England. They are not very material.

2297. If prices in England have fallen to the full extent of the fall in exchange, the disadvantage to the English manufacturer which you have just described to us would vanish? If prices in England fall all round, or all the prices which the manufacturer was concerned with fell to the same extent as the exchange, he would not be worse off than he was before. You would assent to that?—Yes, if it could be carried out automatically. In fact, that would be practically putting the two metals on which prices are based on the same level all over the world.

2298. Then practically your view of the disadvantage to the English manufacturer which results from this fall in prices is that wages in England do not follow at once, perhaps do not follow at all, the downward course of other prices?—Yes, that is it. Then the practical result, you know, has been in accordance with these views.

2299. You do not deny, do you, that India has certain natural advantages which would have produced a great growth in the cotton manufacture, quite apart from the fall in silver?—Yes. This is taken into account here. The margin in the first estimate is $3\frac{1}{8}d.$ in favour of the Bombay spinner, against which the English spinner has to pay his charge of importing cotton and exporting goods, and this estimate takes $\frac{7}{8}d.$ off the price, but the price remaining would still enable the competitor from England to compete with the Bombay mills.

2300. Is there any distinction in your opinion between the case of the cotton manufacturer in Bombay and the wheat grower in India?—I would prefer taking that afterwards. I want to exhaust this point if you do not object. I have here a table of the progress of the Bombay Mills.

2301. Perhaps you will put that in?—Yes, I will put it in (Appendix IX., Table No. 1). I will just state roughly what it means. The Bombay mills have increased since 1877 from 41 to 95. The spindles have increased from a million to 2,200,000 roughly, and the looms have also doubled. Now as to the effect of this trade upon Lancashire. You are all familiar, from Mr. O'Conor's statements, with the rapid growth of the exports from these mills. They were started with the object of manufacturing for the supply of India itself. That was the first intention, but of late years they have become heavy exporters of yarns to China and Japan, exporters of goods also partly to these markets too, but to other near markets as well. These exports are indicated in the Indian trade returns under the heading "Aden" for the Persian and East African markets, &c. The growth of the trade in yarns from the table I have before me is as follows (see Table, No. 2): In the year 1876–77 the exports of yarn from India to China, Japan, and other small markets, were 7,926,000 lbs., the value being equal to 367,303*l.* Last year, 1885–86, ending 31st March, which is the last complete year I have in the Indian statistics, gave 78,238,471 lbs., value of 2,755,042*l.*, and the half year ending 30th September last shows 47,922,360 lbs. I have another statement here, supplied to me by a friend, which shows that for the entire year ending 31st December last, the exports amounted to nearly 100,000,000 lbs. Now that trade has all grown up in these 10 years. Its importance will be manifest when we contrast it with the English exports of yarns to all parts, say 254,346,000 lbs. for last year. The latter also has been keeping comparatively stationary while the former has been advancing so rapidly. (See Appendix IX., Table No. 5.)

2302. But you cannot distinguish in the causes of that progress between those which are due to the natural advantages of India and those which are due to the fall in the exchange?—Decidedly, I think the progress is mainly due to the difference in silver. China and Japan are upon the same basis of value, and the automatic action of the exchange immediately turns the buyer to the Bombay market, and of course when trade once goes away it is gone. You cannot get it back. You require a big inducement to bring it back, and this trade that we had in 20's yarns with these markets is actually disappearing from Lancashire.

2303. (*Sir T. Farrer.*) Is it English capital that has done it?—Native capital and English capital; chiefly native capital in Bombay; but there are large interests in Lancashire; and I would warn you in connection with figures which appear from Bombay and Manchester, in regard to this trade, that vested interests must be taken into account in the matter.

2304. (*Chairman.*) There are certain classes of cotton manufacture in which India cannot compete?—Yes, but they are going on increasing their power to produce finer yarns. The trade commenced first of all with coarse yarns and coarse goods.

2305. If I clearly understood your account of the reasons why the English manufacturer was at a disadvantage owing to the fall in silver, it was due to the fact either that through the appreciation of gold the English manufacturer was now paying more in wages, or if gold has not appreciated but silver depreciated, that the Indian manufacturer was paying less in wages. That was your account of the reason why the English manufacturer was at a disadvantage as compared with the Indian manufacturer, was it not?—Yes; the manufacturer in India continues to pay the same in rupees. I think a cardinal point in all this examination is to take in view the full position that silver still holds in the world.

2306. Yes, but I did not understand how the fact that India is getting up a trade with silver-using countries bears upon that at all. You seem to think that the fact that India trades with other countries using the same currency as herself puts her at an advantage as compared with English trade with those countries. But if the account you have just given of the reasons why the English manufacturer is at a disadvantage is correct, I do not see how that has any effect?—You see the force it has exercised in India.

2307. I perfectly understand why the Indian manufacturer is at an advantage as compared with the English manufacturer in any and every market, gold or silver, but I do not understand from your explanation why India has any special advantage in dealing with a silver-using country?—Because they are on the same basis. China and Japan are silver-standard countries like India.

2308. What has that to do with it on your theory?—Supposing a merchant in Japan has an order to place. He has been in the habit of buying from India and from England. A decline of three per cent in silver takes place. His silver price remains the same in buying from Bombay, and he must pay three per cent. more in silver to England to buy these same yarns.

2309. (*Mr. Courtney.*) It is conceded, let us say, that in consequence of the variation between gold and silver the Bombay manufacturer gets an advantage over the English manufacturer in Bombay?—Yes.

2310. It is conceded that he obtains an advantage over him in China.?—Yes.

2311. Does he obtain the same advantage over him in Australia?—I will answer the question later. But

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the point I urge now is that it is silver-standard countries with which we mostly trade. Three quarters of our trade is with silver-standard countries, and these silver-standard countries have an advantage from uniformity of standard in trading with Bombay rather than England.

2312. (*Sir John Lubbock.*) You suppose that a person in Japan is going to buy a certain quantity of cotton goods, and he has his option of purchasing either in England or in India, England being on a gold basis and India on a silver basis, and let us suppose for the moment that it is the same to him whether he buys from the one or the other. Well then, you suppose the case of silver falling 3 per cent.; I understand you to argue that in that case he would naturally go and buy in Bombay?—Yes.

2313. But why should he fear silver falling?—Because silver is his money. He knows nothing of gold. These Eastern nations know nothing of gold. Silver is their standard. He can pay with silver in Bombay. 100 dollars of silver will buy his yarn from Bombay, and he would require 103 dollars to buy the same yarn from England.

2314. (*Mr. Barbour.*) Unless the English manufacturer will reduce his price by an equivalent amount?—Yes, unless the English manufacturer reduces his price. It does not tell automatically upon the English manufacturer at all.

2315. (*Sir T. Farrer.*) The reason why the Bombay manufacturer gets an advantage over the gold-using country is that his expenses have been lower or have remained the same, while those of the English manufacturer have increased. That would give the Bombay manufacturer an advantage in every market, would it not?—Yes, it does.

2316. Then there is the further question, whether the price which is paid for the article is affected by the change between silver and gold, according as the purchase is made in a silver or a gold-using country. That is an entirely different point, and I do not think we have had any answer upon that point?—I will answer the question most completely now. Certainly it would, just as it does in wheat. It would enable them to compete in gold-using countries—in every country.

2317. It would enable them to compete, but that is because the expenses are less?—Yes; and there is also the further advantage with silver countries of uniformity of standard.

2318. (*Mr. Chamberlain.*) There is another point. An Australian has got 5*l.* in gold to spend. If there is a fall in silver he can buy more cotton for the 5*l.* than before the fall. He cannot buy any more cotton in England than before the fall. The fall in silver has made no difference to the price of cotton in England, consequently the Bombay manufacturer has an advantage in gold-using countries as well as in any other, if there is a fall in silver?—I quite assent to that.

2319. (*Mr. Cohen.*) There is a further advantage it seems to me not touched upon, and that is, that in trade between silver-using countries the Bombay manufacturer is freed from that element of uncertainty against which the English manufacturer has to protect himself by recourse to the banks, which in transactions carried on for a mere margin of profit is an important element. The interposition of banks cannot be done for nothing. That must add a material element to the cost of the trade, from which the Bombay manufacturer is free because he trades in his own metal?—That is one of the strongest elements of all. I say also that the trade having set in one direction, and being upon a steady basis, it goes on firmly; the mere fluctuations from silver variations puts the English manufacturer out of count to a large extent. I have shown you the enormous advance which has taken place in the Bombay mills and in the exports of yarn from Bombay. With regard to our own yarn trade, I have run out from the English Board of Trade returns the exports of yarn to China and Japan, where we compete with these (see Appendix IX., Table No. 2). Well, in 1876, we exported of yarn 29,000,000 lbs. The trade has varied; in 1881, 47,000,000 lbs.; in 1882, 34,000,000; and gradually coming down until last year, it was 26,000,000 lbs. This is alongside with the trade, which has developed from 7,000,000 lbs. to about 100,000,000 lbs., from Bombay to these markets. Our trade with these markets has been gradually falling.

2320. (*Chairman.*) You deduce from these figures that practically the Indian manufacturer has cut us out of the neutral silver markets of the East?—Is cutting us out. I have a memorandum here from one who has very closely studied this matter, and he is perfectly convinced that the trade in 20's yarn, which our former exports to China and Japan consisted of chiefly, is being completely annihilated. He uses that word. If our Board of Trade returns had been more detailed, it could have been brought out that the keeping up of the figures of exports of yarns from England has been mainly due to the increase in the finer counts neutralising the loss in 16/24's to a large extent. I have a list here, including 345,000 spindles formerly employed in this trade, giving details of what has happened to the various mills, some stopped, gone on to 30's, making 40's, &c. Wherever there has been capital, of course, behind these mills they have endeavoured to adapt themselves to something else (*see* Appendix IX., Table No 6).

2321. How is that list of mills obtained; was it taken at random?—No, I have got every name connected with the trade, and I have had the memorandum also confirmed by very careful examination by a friend, Mr. Haworth, a great authority in the yarn trade in Manchester.

2322. So that I might summarise your evidence as regards the effect on the Lancashire trade in these silver-using markets, by saying that for the coarser fabrics Lancashire is entirely driven out of the field?—I would not say entirely driven out, but is being driven out in these near markets as regards coarse yarns and coarse goods.

2322*a*. And so far as she keeps her place at all, it is in the manufacture of the finer kinds?—I would rather put it that there is danger to Lancashire from this competition. The whole cotton trade of India in goods is still a small thing as compared with the great cotton export trade of England, and but for the exchange difficulty the enterprise of Lancashire would enable her to hold her own against the advantage of proximity. I have seen paragraphs in the newspapers say that the yarn of the Bombay mills was preferred in China and Japan owing to its better quality. That is a great fiction.

2323. Has Lancashire been entirely struck out of the Australian market?—India does not, I believe, send cotton goods there.

2324. Communication is as easy between India and Australia as between India and Japan?—Yes. There is a trade in jute goods from Calcutta.

2325. Do you know whether the cotton goods which are in request in Australia belong chiefly to the finer kinds, or to the coarser?—I have no special knowledge of Australian markets.

2326. (*Mr. Houldsworth.*) Could you give any opinion as to South America?—No; there is no competition there. They have not got there yet. Then our trade also in goods with China and Japan, which is a very important trade, has been almost a stationary trade the last 10 years. Of course it is a small thing yet what the Bombay mills are doing in goods to China and Japan, as compared with what they are doing in yarns, but they are rapidly increasing. The English export trade from England to these markets was in the year 1876 491,000,000 yards, and last year it was 490,000,000 yards. It is practically a stationary trade; we have not increased. (See Appendix IX., Table No. 3.)

2327. (*Mr. Courtney.*) You spoke of the trade of East Africa. How far down does that go—to Zanzibar?—There are no data in the Board of Trade returns which cover these countries, except in a rough

way; under "other countries" the Board of Trade returns show a declining trade to "other countries."

2328. I meant the Bombay trade. You spoke of the Bombay trade with China, Japan, the Persian Gulf, and East Africa. How far down East Africa did you go?—I simply took the figures as given in the trade returns of the Indian Government. They simply give "Eastern Africa," along with other places to which shipments are sent. The "other countries" in our Board of Trade returns show a marked falling off, and that is accounted for by the competition of India in these markets, I quite believe, both in goods and yarns. In goods in 1883 they took 173,000,000 yards, as against 152,000,000 yards last year. In yarns 11,000,000 lbs., as against 9,000,000 lbs. (See Appendix IX., Table No. 3.) Then one other point. There are a great many rough and partial statements made with regard to the increase of the Lancashire trade. Of course as to figures, if you take a big enough average, you can show a very large increase; our trade with India has been always a rapidly increasing trade, but the last six years it was almost stationary, until the last six months, or nine months, when there has been a rapid increase. (See Table No. 4.) This increase is due to a variety of causes. There were religious restrictions with regard to marriages previously in force, and these no doubt helped to account for the dulness of the previous two years. Markets were getting bare, and an increased offtake resulted when these restrictions were removed. The improvement in exchange also during the latter half of the year kept business rolling. The last six years has seen a great development in India from the extension of railways, and an increased demand for cotton goods was to be expected from this.

2329. Are you talking of the whole cotton industry?—I am referring both to India and the whole cotton industry. I have got a statement here of the latter showing that from 1850 to 1860 there was an increase of 50 per cent. in yarns and 104 per cent. in goods, the values corresponding nearly to the same figures. In 1870 there was a slight decline in yarns, and an increase of 17 per cent. in goods, and then the next period up to 1880 an increase of 15 per cent. in yarns, and 38 per cent. in goods. (See Appendix IX., Table No. 5.)

2330. (*Sir T. Farrer.*) In quantity?—In quantity. However, the most important point of all is that the spindles in Lancashire, in place of increasing during the last three years, have decreased. We hear, of course, a great deal about the new mills and their increase, but people do not bear in mind that these are simply taking the place of older mills. Since 1884 there is 300,000 of an increase in the Oldham district, but 600,000 of a decrease elsewhere, being old spindles burned or broken up.

2331. (*Mr. Chamberlain.*) Has not the production per spindle greatly increased?—Yes, but not over that short time. The increased production of spindles has been going on over a longer time. That is not a matter of the last year only, but for many years.

2332. (*Mr. Houldsworth.*) What is your authority for the statement?—Ellison's annual review. The figures also show the progress in other places; they are as follows:—

Estimate of the number of spindles in Europe, America, and India:—

	1886.	1885.	1884.	1883.
Great Britain	42,700,000	43,000,000	43,000,000	42,000,000
Continent - -	22,900,000	22,750,000	22,650,000	22,500,000
United States	13,350,000	13,250,000	13,200,000	12,660,000
East Indies -	2,100,000	2,000,000	1,950,000	1,700,000
	80,350,000	81,000,000	80,800,000	78,860,000

2333. (*Chairman.*) The oscillations of the trade go, broadly speaking, with the phenomenon known as general depression of trade. The Lancashire production ceased to increase to the same extent as before, just when every other industry was depressed and has begun to revive now that other industries are reviving?—Yes, there is no doubt that the constant decline in prices of everything connected with the cost of a mill led very largely to the building of new mills. Promoters found room for promoting a company because they could produce at a less price per spindle, and cut in. I have no doubt the very fact of prices always falling, for a while at all events, tended to increase the competition from the new mills.

2334. That would depend, would it not, on whether the price of building a mill fell more than the price of the cotton which was produced by the mill. If speculators knew that any advantage which they might get from the cheapness of building the mill was more than compensated for by the fall in the price of the cotton which that mill was to produce, they would not be more disposed to invest their money in that way than they were before?—If there was a certain mill making five per cent. profit, and the spindles cost 25*s*., well, if a new mill can be put up with a smaller capital, say at a cost of 22*s*., there is a motive to go into the trade on the part of promoters. The extension of the trade has been very much owing to the Limited Liability Act giving promoters, who have no interest in the trade, enormous power. I have got here a list of the Oldham mills. It shows that out of 80 mills I think over 60 are at a discount. There is very few at a premium, and a few at par. The great bulk are at a very heavy discount per share. (*See* Appendix IX., Table No. 7.)

2335. Turning now to the question of the effect upon the export of wheat, may I ask you whether the nature of the stimulus given to the Indian wheat trade by the fall in silver differs in any respect from the stimulus given to the cotton manufacturers of Bombay?—It is practically the same, but still I do not regard the stimulation from exchange as such an important factor in the case of wheat as the enormous power of laying down wheat at the ports which the railways have given. I have examined very carefully a pamphlet published three years ago, in which, on the basis of 1*s*. 8*d*. exchange, the writer, Major Conway Gordon, showed that India would be able to compete with America. There has been a very large development, as you are aware, of railways in India, and the power which this development has given has been very great.

2336. Yes, we have that in evidence from other sources. Do you adopt the opinion that every fall of 1*d*. in the exchange means 1*s*. 6*d*. per quarter in the price at which Indian wheat can be laid down in England?—Yes.

2337. Could you explain exactly the mode in which the fall in the exchange produces that result?—I have told you the difficulty with which prices of goods are advanced in India. The adjustment of prices of produce in England, on the basis of foreign cost, takes a different course from what we have seen is the case with goods. In the one it is slow and difficult. In the other it is automatic and immediate. In the case of produce, the rate of exchange is simply an element of cost, and the merchant in India, when he finds that he could sell his bills at a fraction lower, without seeking for any reduction in the rupee price of the grain, at once telegraphs an offer of a cargo or cargoes at something under last price, and immediately secures a sale. India in this way dictates the price of wheat, and, as has been pointed out, every fall of 1*d*. in exchange means 1*s*. 6*d*. per quarter in the price at which Indian wheat can be laid down in England. I will not follow this aspect of the question further, my chief object being to point out the distinction that must be observed in the slowness and difficulty with which Eastern markets respond to enhancement of rupee prices necessary from exchange differences in the case of English goods, and the rapidity with which these exchange differences tell in the case of prices of Indian produce in England. Both are due to the comparative immobility of silver valuations which I have pointed out. In the one case silver, in a sense, disowns gold valuations as a controlling element. In the other, silver valuations remaining the same in the

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East, the altered relation of silver to gold in Europe must immediately affect the prices of Indian produce there.

2338. Then is it your opinion that if exchange suddenly began to go the other way, and from 1*s.* 6*d.* rose to 2*s.*, exactly in the same way that it has fallen from 2*s.* to 1*s.* 6*d.*, the Indian manufacturer would not lose with the same rapidity and certainty that the English manufacturer now loses?—He would be at a disadvantage. Of course with a rise in exchange it is automatic to the seller here too, and we find the experience of Manchester in the last six months demonstrates that most completely. The thing has been divided. Manchester is getting a portion of the improvement of exchange; Bombay gets the most of it. The manufacturer here knows that he can sell cheaper in rupees, and offers goods, and the Bombay dealer or the Calcutta dealer buys at lower rupee prices, which still mean higher prices in English values.

2339. So that really there is no distinction between the two countries in that respect?—Yes, but the great thing I wish to point out is that the fall in price breaks down our English values of wheat. It has done so.

2340. And a rise in the exchange would stop it?—Yes, of course. America is looking on watching the course of exchange, and it is simply the low price of Indian wheat that keeps down the price of American wheat.

2341. (*Mr. Birch.*) Can you tell us what proportion of the total imports Indian wheat represents in this market, because that is the question if she is to compete with other countries? Is it not the fact that out of 81,000,000 cwts. India only sends 12,000,000 cwts., while Russia, with paper money, has the same amount?—It is the immediate action of the exchange; it is automatic; it brings down the price of wheat. There is no doubt that the moment a fall in exchange takes place, while there is no change in the value of the article in India, the merchant can at once offer cheaper in England.

2342. The exchange was 1*s.* 7.89*d.* in 1881, the price was then 45.4*s.*; in 1884 it was 1*s.* 7.30*d.*, a fall of 2 per cent. in the exchange, and the wheat was 35.8*s.*; so that there is a difference of 22½ per cent. against 2. Under these circumstances, can you say it dictates the market price?—No.

2343. (*Chairman.*) But is it not a fact that a source of supply, though comparatively insignificant, if cheaper than any other source, may rule prices up to a certain point?—Yes. The power of India to give wheat also is enormous. It is only, you may say, partially tapped. I believe that India will always go on producing wheat, even though exchange were to advance to the old point. I am perfectly sure in my own mind about that.

2344. (*Mr. Barbour.*) Is not an additional or extra supply of an article of food generally believed to have a more than proportionate effect on the price?—Possibly.

2345. (*Sir John Lubbock.*) When you speak of fluctuations in exchange, you mean practically fluctuations in the value of gold and silver?—Yes.

2346. You are aware that we are deputed to enquire whether those changes are due to the depreciation of silver or to the appreciation of gold, or to both those causes. I gather that your opinion is that it is due to the appreciation of gold?—Yes. But I attach more importance to the collision of the two valuations. It is the lower valuations of silver countries as rendered in sterling that have dragged down our prices in gold.

2347. If the price of silver is lower with reference to gold, it follows, does it not, that either the silver must have fallen or the gold must have risen?—Yes.

2348. Well, I gather from your evidence that you considered that it was the gold that had risen?—Yes, gold prices have fallen.

2349. Then I may take it that your opinion is that the change has been due to the appreciation of gold?—Yes. The scarcity of gold and the collision of the two valuations have driven down the prices. For instance, I do not think that the restoration of exchange would raise prices all round in relation to the difference.

2350. Leave exchange aside for the present. There has been a change in the relative value of gold and silver. Silver is not worth so much in relation to gold?—Yes.

2351. That must either be because gold has risen in relation to silver, or silver has fallen in relation to gold?—I believe it is gold that has risen in relation to silver.

2352. Now we come to the question of why the gold has risen. Your opinion is that it has risen not so much from actual scarcity, or from increased demand, as from the conflict of the two valuations and from the discredit thrown on silver in Europe, leading European nations to look to gold only as the basis of their reserves. Do you mean that there has been a greater demand for gold in consequence of the adoption of the gold currency in European countries?—The countries have had to look to gold for the reserves chiefly; and there is an uneasy feeling in England that the reserve is too small.

2353. Then I gather that your opinion is that the appreciation of gold has arisen from the increase of demand, and not from the diminution of supply?—Yes.

2354. And you consider that that change has been injurious to commerce?—Very much so.

2355. Then we are to enquire whether it is possible to suggest any remedies within the power of the legislature or the Government. Are you prepared to suggest to the Commission any definite remedy?—I am thoroughly of the belief that an international arrangement, fixing the ratio between the two metals, would be the best.

2356. And what ratio would you adopt?—As a bi-metallist, I am not bound to any ratio, but I believe that practically we would come to 15½ to 1. Once remove all fear of further demonetisation of silver the price would gradually and permanently improve, and if European opinion pronounced itself in favour of an international arrangement, it is likely that before it was consummated the actual ratio current might not be very far from the old type.

2357. You stated in your evidence, if I understood you correctly, that a fall in silver would lead a Japanese purchaser to buy in Bombay rather than in England?—Yes.

2358. Now supposing he has 1,000 dollars, and he is going to invest that in cotton, and silver falls 3 per cent., of course in England he would get 3 per cent. less than before, because the silver has fallen 3 per cent.?—Yes.

2359. And if it has fallen 3 per cent. in Bombay, would he not also get 3 per cent. less?—It never falls at all. The Japanese takes silver to Bombay as against silver prices, which are not immediately affected. He sends his silver to England as against gold prices, which are automatically affected in relation to silver by a fall in exchange.

2360. You mean to say that if silver falls in England and not in Bombay, then it would lead to his purchasing in Bombay rather than in England?—Yes, it does not fall in Bombay; it is money.

2361. Exactly; but if it fell everywhere, it would not give him any advantage in buying in Bombay?—It is the money of India; it does not fall.

2362. If he has got silver and wants to change that into cotton, and the silver falls in England and not in India, then it is to his advantage to buy in the market where silver has not fallen rather than the market where silver has fallen?—Yes.

2363. Now you say that the power of silver-money has not been altered over the vast area of the East, and you refer to the table which has been put in by Mr. Barbour, and which shows that the fluctuations of silver have followed approximately the fluctuations in general prices?—Yes.

2364. Therefore, if silver has fallen 20 per cent., and general prices have fallen 20 per cent. in India,

there would have been no alteration of price reckoned in silver?—No.

2365. Therefore, all that you mean to say is that practically silver has followed the general course of prices?—Exactly. Of course I am taking the Indian standpoint of silver.

2366. Then in real truth silver has followed the same course in the East that it has in England. It has fallen 20 per cent. in relation to gold, but maintained the same valuation in relation to other commodities?—Silver and commodities go together; gold takes a different line.

2367. Quite so, and that has been the same in England and in Europe as it has been in the East?—But then, of course, the money there is silver, and they do not know. The point I wish to bring out is that these Eastern nations know nothing of this gold question at all; they are based upon silver. They receive silver, and they pay it away. In internal trade they never come to the touch point, as it were, to determine the value of silver in relation to gold.

2368. But still, whether they know it or not, the actual fluctuations have been in the East as in the West?—Oh, yes, in relation to gold. The object of my illustration was to show the immediate effect when a fall in silver takes place in diverting the trade of the Japanese to Bombay in place of England. Of course adjustments to a large extent come into play, as I have already said, but in the meantime he has found a new source of supply where his silver money will be no difficulty to him.

2369. Then you said that any one acquainted with the Manchester market can testify that business there is always checked when a fall in silver takes place. The fact is that the exports to India are checked, the imports from India are encouraged. When you speak of their business being checked, you mean their import from England to India is checked?—Yes, until prices adjust themselves.

2370. And, conversely, imports from India into England are encouraged?—Yes.

2371. Then you said India dictates the price of wheat. Do you consider that the 12,000,000 cwts. supplied from India to our market here affect the price of wheat more than any other 12,000,000 cwts.?—I believe that the Indian exports have affected the market very materially.

2372. No doubt you cannot import 12,000,000 cwts. of wheat without affecting the market, but do you consider that these 12,000,000 cwts. dictate the price in any sense other than that in which any other 12,000,000 cwts. would dictate the price?—In the sense in which the thing is dictatorial it is a change, arising from a change of silver. Of course there is always a keenness to sell and a difficulty to get the price and competitors in selling use everything that comes in their way. The Indian importer has an advantage, you may say, in the lower price of wheat from a fall in exchange, and he rushes into the market to secure a sale, and that brings down prices.

2373. (*Mr. Houldsworth.*) With regard to the checking of business, you said it was checked until prices had adjusted themselves. Does not that adjustment of prices pretty fairly follow the exchange?—With a fall in exchange in a foreign market, prices are not affected by mere speculation as to what will happen. I have been conducting a house abroad, and I know the difficulty of getting prices up when changes of values take place, and you cannot as a rule act very much upon mere speculation upon foreign dealers. It is only if they see a scarcity going to ensue that they will pay higher prices.

2374. Is the disturbance greater from exchange before prices adjust themselves than from any other cause which disturbs a market? For instance, cotton famine, a rise in cotton, all those disturb the prices, and the prices are supposed to adjust themselves. Is a disturbance caused by a fall in the exchange or a rise in the exchange different in character or in degree from such a disturbance as may arise in the ordinary course of business?—It is one that has come upon the market more frequently. It is over and above the ordinary causes of variation.

2375. But is there any cause for there being a longer time before prices adjust themselves?—The money in the hands of the Bombay dealer, as it were, sinks in value.

2376. Does it take a longer time to adjust than if cotton suddenly rose or suddenly fell?—Of course, it is practically of the same nature in being a disturbance.

2377. All that you would say is that it is another cause of disturbance?—Another cause of disturbance.

2378. And that it acts and follows the same laws as other causes of disturbance?—Yes, but your knowledge of the Manchester market must have shown you that it is continually watched. It affects the market from day to day.

2379. Just as the price of cotton is watched?—Yes.

2380. (*Mr. Fremantle.*) Would you be very much against the expediency of introducing a gold standard into India?—Very much.

2381. Would you give the Commission shortly what the objections to an introduction of a gold standard into India would be?—First of all the drain on the supplies of gold would have a great effect upon Europe; then again I think it could not be carried out, it would be ineffectual; it would land India, I believe, in a double currency. It would of course be effective between traders at the ports, but as regards the internal trade of India, I do not believe it would touch it at all. If it did touch it, it would simply lead to a double and a confusing standard. And then again there is further the competition between India and China, which would be affected. India would be disadvantaged. China, remaining on the silver standard, would compete more successfully with India in tea and other things.

2382. Then you said that there would be a greater drain of gold from Europe to India if a gold standard were introduced. Would not the adoption of a gold standard bring out in part at least, the large hoards of gold that are already in India?—It might to some extent.

2383. Gold was the standard of value, I believe, in India till 1835, was it not?—I do not think it was really the standard over India.

2384. Can you say what led to the adoption of the single silver standard?—I am not acquainted with that; I cannot go into details.

2385. You said just now that a gold standard could not be introduced because it would be inconvenient in a silver-using country, but might not a gold standard be introduced with a fiduciary issue of notes as at present, and be the foundation of the currency system of India, rupees circulating as tokens to the extent of 50 rupees or so?—That would be simply bimetallism, and of a bad kind.

2386. No, because the legal tender of the token coinage would be restricted?—I think it would be.

2387. I think you said that if the price of silver went back to 42*d.*, with a dark abyss of further probable fall again before it, not only Lancashire, but the whole country would be plunged into as deep or deeper suffering than ever. Do you think that you can say that, when silver fell to 42*d.* a short time ago, and very suddenly, the country was plunged into deep suffering?—Perhaps the language was too strong, but no doubt the state of things in Lancashire in the middle of last year was very bad indeed. We were on the eve of strikes against proposed reduction of wages.

2388. And you attribute that to the fall in silver?—Yes.

2389. You are aware that in April 1878 the United States passed the Bland Act, as it is called, for the remonetisation of the silver dollar. Can you tell the Commission what the price of silver was?—The price of silver then was $54\frac{1}{16}d.$ per ounce in the London market.

2390. Now the price of silver is something like

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47*d.* per ounce, is it not, in the London market, that is, 7*d.* an ounce cheaper than it was in 1878?—Yes.

2391. Has not the result of the Bland Act been that America has coined very nearly 5,000,000*l.* sterling of silver every year since that time?—Yes.

2392. Therefore is it consonant with the facts to say that steps to be taken on the part of America and France would be sure to lead to a further depreciation in the value of silver?—There would be so much silver thrown upon the English market. The mere fact of the repeal of the Bland Bill being talked of a year ago had that effect.

2393. But if, notwithstanding that 5,000,000*l.* a year was taken out of the stock of silver in the world and coined, and has had no effect in stopping the fall, does it not show that the action of governments has very little to do with the matter?—No; I take a different view of it. With regard to the price of silver, the facts are these:—In the year 1876 silver touched 47*d.*, and it was the discussions in America, leading ultimately to the passing of the Bland Bill, that mainly led to the improvement that set in after August 1876. But when I say a further fall disorganises trade, it is not this or that point of silver that I have in view. The present rise in silver has led to a slight fall of rupee prices in India. If silver were to go back again to 42*d.*, the dealers would not pay the difference; in fact, we would have a difficulty to get up the prices to what they were when silver was down at 42*d.* It is the friction of the two valuations in these violent oscillations that brings down prices.

2394. According to that reasoning, would not a rise in the market price of silver also have a bad effect on trade?—No, it has not had this effect; the injurious effect will come if it falls back again. We find nobody suffering from a rise just now to any material extent. The advantages are all in favour of traders.

2395. (*Sir T. Farrer.*) I gather from your evidence generally that you think the effect of the fall in silver, or of the rise in gold, is to check exports from England to India, is it not?—Yes.

2396. And to stimulate imports from India into England on the whole. Have you looked at the figures for the last 10 years?—Yes.

2397. Do you find that the exports from England to India have been checked, and that the imports from India into England have been stimulated? Is it not the fact, if you look at the increase of the two trades, that there is not much difference?—Yes.

2398. Well, would not you have expected, if the fall of exchange was to have this very great influence which it is said to have, that you would have seen it in the general statistics?—The position which I take in regard to India is this: India has certainly advanced very materially in recent years, but I believe it should have advanced very much more from the development of railways that has taken place.

2399. I quite agree with you about the advantage of railways and the advance India has made, but I was speaking of the relative increase of exports and imports, and I can find in the general figures no confirmation of the theory that the fall of exchange has checked exports from England to India, or stimulated imports from India to England, whether you follow the general figures from year to year, or take the figures month by month as the falls in exchange occurred?—I believe that our exports from India have been stimulated, and that our exports to India have been checked, not absolutely, but relatively.

2400. Is there any evidence of that in the general figures given in the statistical returns?—Yes, I think there is. We have not made the progress we should have made.

2401. But I am talking of the relative increases, imports and exports of merchandise, exclusive of treasure, and I take the imports of merchandise in the years in which the fall of exchange has occurred. The great fall of exchange has taken place since the year 1875–76; taking the five years immediately before that, and the two subsequent quinquennial periods, the average imports into India were 32,000,000*l.*, 37,000,000*l.*, and 50,000,000*l.* Then the exports were 57,000,000*l.*, 62,000,000*l.* and 82,000,000*l.*; so that really there is very little difference, or what difference there is is rather in favour of the imports into India; and if you take the figures of the trade with the United Kingdom only, you will find that they come to the same thing?—This is the position I take with regard to India, that India has progressed. I have not followed out the figures you speak of, but I have taken other data, and I believe the growth of the Indian trade would have been very much greater on the old ratio than it has been. On a higher basis she would have got more rupees for her produce, and though she would have had to pay more for imports, yet from the fact that her exports of merchandise are always much greater than her imports of merchandise, the gain in rupees would have been greater than the loss, leaving a larger balance available for spending on imports.

2402. Then supposing there is an undoubted divergence of value between gold and silver. Well, that must have arisen either from the gold having risen in value or silver having fallen in value. I think it is rather your opinion that gold has risen?—Gold has risen.

2403. Supposing that this divergence has arisen from the fact that gold has appreciated, I want to know exactly how that appreciation of gold and the alteration in exchange in consequence affects imports and exports. Take the English merchant who wants to buy wheat in India. Gold has risen, consequently more rupees have to be given for a sovereign. I want you to explain to me exactly how it is that under those circumstances the alteration affects him so as to enable him to carry on his business at a greater profit?—The sovereign can buy so many more rupees, and then the rupees can buy the same quantity of crops.

2404. But is not the sovereign worth so much before the merchant in England begins to buy rupees with it, and so much more when he gets it back, after having bought his corn in India and sold it in England?—That scarcely enters into the matter of competition. The simple fact is that grain is selling at a certain price in India, and the Indian knows nothing of the change that has taken place with regard to gold. He simply has to sell his article, which he sells at the same price which he did formerly, and you can buy with the gold sovereign more of the rupees which he wants to get paid him.

2405. I think I am right in saying that the business of buying wheat in India and importing it into this country is carried on principally from England, and by capitalists from England?—Yes.

2406. They have to give a certain quantity of gold, and they buy rupees with it. With those rupees they buy wheat, and they bring that wheat back to this country?—Yes.

2407. Then the hypothesis is that gold has increased in value both against silver and against commodities?—Yes.

2408. Therefore when they give 100*l.*, they have given something which is worth much more in commodities than 100*l.* would be before?—Yes.

2409. They buy with it so many more rupees; they buy with those rupees the same quantity of corn which they got before. They get for that same quantity of corn a smaller quantity of gold than they would have got before prices fell, but that gold which they get is worth more when it comes back to England than it was before it went abroad, and is not the thing as broad as it is long?—Not at all.

2410. I should like you to explain how that is. I am overlooking all the details as to the mechanism of exchange and looking at the trade transaction?—Oh, you may put article against article, but you cannot sink the valuation. The silver of India is the instrument of price, just as the sovereign is, which you must take into account as the measure of value when you consider the thing from the English side. While the merchant in England may negociate the transaction,

India is the real seller, and a lower silver exchange enables the wheat from India to be offered at a lower gold price as against other competing supplies. The English merchant may or may not intervene, just as he thinks it may suit him. If not bought by him, it will still come forward consigned by the Indian merchant.

2411. Then let me go on and ask you this. Trade is ultimately barter, is it not, commodity against commodity?—Yes.

2412. What governs the real price of commodities is, on the one hand, the cost of production, and, on the other hand, the demand for them?—Well, I think we differ there very materially if I am to suppose that you would attempt to gauge value apart from the monetary measure. The word price has no meaning, and, indeed, cannot be used, without reference to a monetary standard.

2413. There are very material elements, are there not, in India, quite independent of the question of exchange, which account for a large reduction in the price of Indian commodities, and especially of Indian wheat? You entirely agree with that?—I quite agree.

2414. Railways, for one thing?—Yes.

2415. The taking off of the export duty on wheat for another?—Yes.

2416. The immense reduction of freights for another?—Yes.

2417. Those are apart from exchange; reductions in actual value as exchange against all other commodities?—Yes.

2418. Consequently, whatever exchange does, those are certainly principal factors in the reduction of price?—Yes; so strong that I think these factors themselves would enable India to compete with America on the old basis of exchange.

2419. (*Mr. Courtney.*) Your main position is this, that owing to the great mass of silver in the East, and the conservative habits there, silver prices are comparatively immovable?—Yes.

2420. But the price of silver in relation to gold undergoes great change in the London market generally?—Yes.

2421. We are therefore able to get for the same quantity of gold a larger quantity of silver, and a larger quantity of the commodities which are exchanged for silver?—Yes.

2422. Well now, taking the broad view of the trade between the United Kingdom and India, has not the course of it been that we get from India a much larger valuation of commodities than we send to India?—Yes.

2423. And we have been sending from year to year bullion, to make up part of the balance?—Yes.

2424. We buy commodities that we receive from India more cheaply than before?—Yes.

2425. That is gain?—To this country, yes.

2426. We sell the commodities that we send out more cheaply?—Yes.

2427. That may be a loss?—A loss.

2428. But if we get much more than we lose, and we make up part of the balance in silver, which is cheaper, is there not, on the whole, a balance of gain to the United Kingdom?—Yes, in a sense.

2429. Whatever Manchester or Lancashire may suffer, the United Kingdom gains?—In a sense, yes, but it is not merely a matter of balance; each may gain something as against its loss, and still both be greatly worse off than if these difficulties did not exist.

2430. Well, now turn our attention to India. In consequence of the same facts, India has been able to develop a very large and increasing manufacture and export of cotton goods to the East?—Yes.

2431. Is that a gain to India?—A gain to India.

2432. And what has India as a community lost?—As against that?

2433. Yes.—Nothing, as against that individually; Lancashire has lost.

2434. But you say the United Kingdom as a whole has gained?—By cheap produce.

2435. The result is that the United Kingdom as a whole has gained?—No, I do not admit that. I said that the price of things that we export has gone down; besides, cheap Indian produce would not compensate England for the loss of her cotton manufactures.

2436. India has gained through the fact that silver has become cheaper relatively to other commodities. Why should we be discontented, when we have a gain on both sides?—It is not easy proving things off hand, but you would find a difference.

2437. I quite understand Lancashire and the Indian Government, but why should the two communities be discontented?—Of course a great many things have to come into play, the loss on Council drafts and a great many other things; loss on what is remitted for private investments; all these things would counterbalance. I believe that if silver were restored, India on the whole would gain; and England would also gain, not only as regards her trade with India, but also from the general effects of the settlement of this question.

2438. (*Mr. Cohen.*) When you say that the United Kingdom gains, you assume that we gain by the commodities that we purchase being obtained cheaper. Is that not so?—Yes.

2439. We were obliged to sell those things cheaper, and those persons in this country who produce those commodities suffer?—Yes.

2440. Well, do you assume that low prices in this country are an advantage or an evil?—Well, they may be an evil in some cases, and they are certainly an evil when due simply to monetary disturbance.

2441. Well then, if they are an evil, the United Kingdom does not gain in consequence?—Yes.

2442. You do not take it to be a proved fact either one way or the other, that low prices are an evil or an advantage?—Yes.

2443. What I want to bring out is this. Is it not an important element in the question whether low prices are an advantage or a disadvantage. If they are a disadvantage, then, of course, the creation of these low prices by the greater quantity of goods obtained from the rupee is an evil. If they are at advantage we have nothing to contend against. In seems to me, therefore, that the whole question of the advantage to the United Kingdom turns on the point whether low prices are to the mass of the people of England an advantage or a disadvantage?—They may to some extent be a disadvantage.

2444. Then you would not like to give an opinion on that?—No; I would not like to give an opinion on the general question you raise.

2445. (*Mr. Chamberlain.*) You contend that the fall in the price of silver has been a disadvantage to the manufacturer in Lancashire, and to some extent to the farmer in England?—Yes.

2446. In the case of the manufacturer in Lancashire, you say that the exports, which were rapidly developing, have received a very considerable check?—Yes.

2447. And you attribute that to the corresponding improvement in the condition of the mills and manufactories of Bombay?—Yes, in some departments only.

2448. They have gained what Lancashire has lost?—Yes.

2449. They have been greatly extending in number and the quantity of their production, and they are also going into new manufactures?—Yes.

2450. All this has been brought about to the injury of Lancashire by the fall in silver?—Yes.

2451. And if by legislation you were to restore the old relation between silver and gold, Lancashire would recover its loss?—I would not say that. The mills are there, but they would not be stimulated as they now are.

2452. But they would gain at all events by this change?—Yes.

2453. And of course Bombay would lose?—Yes. I believe that she would still have her area for these mills going on. They are there, you know, but there

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would not be an impetus to put them down that there is now from cheap silver.

2454. But the effect of this change is to give a great stimulus to Bombay, and Bombay would lose that stimulus if that policy were adopted?—Yes.

2455. Then I ask you, do you think that the Imperial Government has a right artificially to interfere for the benefit of Lancashire, when at the same time that would be proportionately to the injury of Bombay?—She is gaining from what I hold to be an artificial arrangement. It is simply a fictitious derangement of the valuations of money. Money should measure everywhere and always the same. India is quite entitled to every advantage from natural facility and position, but I hold that this silver advantage is a fictitious one, from the derangement of the two valuations.

2456. But the effect would be, would it not, that the Imperial Government, in which India is not represented, would take a course which would injuriously affect India for the benefit of Lancashire?—It may be put that way, but still this thing has been going on to the injury of Lancashire or England, and to the advantage of India, from want of this fixed ratio.

2457. I think you agree with what I have hitherto said, but you think that the advantage is an unfair one?—An unfair one; that is it. Departing a little from the immediate point, I hold that the true relation of the metals has always been that of bearing a fixed ratio the one to the other. It is a modern thing, the want of a ratio between these two metals. The two metals form together the world's money, and we have allowed the two heaps of the world's money to diverge in a way that has never happened before, and that is producing these difficulties.

2458. (*Mr. Birch.*) Mr. Courtney asked you just now whether prices are immovable in India, and you said yes. I do not exactly know what you mean?—Well, in responding to silver valuations outside of India. There is a great mass of value in silver as the basis of the silver valuations, and you cannot easily move prices in India by any difference between the two metals.

2459. They are varied by a good and bad harvest, and by other circumstances. As to the difficulties you pointed out in exchange, I think you said you dealt with Brazil and other countries; but these differences arise with every country. In Brazil we have had the milreis worth 17*d.*, and we have had it worth 27*d.* It varies, and the merchant has to take these variations into consideration. The exchange is the basis of their operation. A varied exchange you must always be prepared for?—These are countries where paper money is in circulation. In Brazil the exchange quotations are made in inconvertible paper money, and include both the variations in that paper money in its relation to gold, and the ordinary exchange variations from the swaying of the balance of trade. In Buenos Ayres, with which I trade, exchange quotations on Europe are all made in gold and vary very little, not more at the maximum than 2½ per cent. There also, as in Brazil, inconvertible paper money is the currency, and the variations of this in relation to gold is shown in the premium quoted daily. In remitting, merchants have first to sell their paper money for gold, and then buy exchange with the proceeds. Two operations, as against one in Brazil.

2460. (*Mr. Barbour.*) I think you hold the opinion that a fall in exchange causes a fall in gold prices in England?—Yes.

2461. Have you ever considered whether it is not possible that the fall in gold prices may cause the fall in exchange—the two are connected?—Yes.

2462. Is it not possible that the fall in gold prices may cause the fall in exchange?—My practical observation of the action of the two things has been always that it is the fall in silver exchange which has produced the fall in gold prices.

2463. The fall in exchange comes first, and the fall in gold prices afterwards?—Yes.

2464. I think you said in reply to Mr. Houldsworth that the adjustment of prices when there was a fall in exchange did not differ from the adjustment of prices when there was a scarcity in cotton, or anything affecting the price of cotton. I wish to ask you whether, if there was a scarcity of cotton in two countries having the same standard, the price would not rise equally in both?—Yes.

2465. If they have different standards, and the adjustment of prices comes from a fall in exchange, prices either rise in the one country or fall in the other; the adjustment of prices is not in the same direction in the two countries, consequently one may have the advantage, and the other may have the disadvantage, and an injurious inequality of gain or loss be thus produced?—Yes. Whenever there is a drop in exchange, it seems to be the fate of the English manufacturer to bear it.

2466. With regard to the question whether India and England have gained by the fall in silver, are you of opinion that India has gained in some respects?—In some respects.

2467. And you think England has gained in some respects too?—Yes.

2468. Is it your opinion that India on the whole has gained?—No, quite the reverse.

2469. It is not your opinion that on the whole England has gained?—No.

2470. You say that India would lose if Bombay was deprived of the artificial advantage which she now gets from the fluctuation and fall in exchange?—Yes.

2471. But are you of opinion that a stable ratio between gold and silver would give India other advantages that would much more than compensate for that loss?—I think so. I have a very strong opinion as to that. I have examined the arguments of those who seem to think that the settlement of this question would be adverse to India, and I have come to the very opposite conclusion, and am very strongly of opinion that India would benefit on the whole very materially.

2472. Does not this complicated system, which is now found necessary in trade transactions between England and India, appear to you to show that the mechanism of exchange between the two countries is defective?—Yes.

2473. And I suppose it brings extra work to the banks who deal in exchange?—Yes, of course it does.

2474. I suppose they find their profit in that?—Yes.

2475. So that removal of the present evils would not be an unmixed gain, so far as regards the banks?—No, but I think they would have great gain ultimately, in the fact of being able to utilise their capital in India. Just now they are obliged to trade, when they trade in India, upon Indian capital.

2476. But people sometimes look more to the immediate advantage of the day than to any possible advantage which they might get afterwards?—Yes.

2477. You have said that the establishment of a fixed ratio between gold and silver would be a gain to India. Would you mention in what respects that gain would arise?—Well, I have examined the question in this way:—

I assume an advance of 25 per cent. in rupee exchange, taking into account in the results to India the different range of prices which would likely then prevail in Europe. I assume a probable average advance of 12½ per cent. in European prices of Indian produce, and an average advance of 5 per cent. in European prices of merchandise imported. Many articles of produce would doubtless advance much more, and some would be little affected by the change as regards the results to India, say for instance opium, but I assume these average figures as probable from what has taken place during the recent rise in exchange. There have been important advances in some articles of Indian produce, and Manchester has got some advantage from the improved exchange, a slight advance on goods for India having been established. I submit

the figures simply as an aid in judging the question in an overhead way, not dogmatically, and in view of statements that have been made as to India's interests being likely to be sacrificed by the restoration of something like the old steady rates of exchange.

	Rs.
In 1885–6 India's exports of merchandise amounted to - - -	83.80.00.000
In 1885–6 India's imports of merchandise amounted to - - -	51.80.00.000

	Loss. Rs.	*Gain.* Rs.
On Rs. 83.80.00.000 exports India, at ex. 1*s.* 10½*d.* against ex. at 1*s.* 6*d.*, would lose	16.76.00.000	
As against this she would gain, from enhanced European prices, 12½ per cent.		8.38.00.000
On Rs. 51.80.00.000 imports India, at ex. 1*s.* 10½*d.* instead of 1*s.* 6*d.*, would gain -		10.36.00.000
But against this she would lose, from higher European prices 5 per cent. -	2.07.20.000	
On balance of silver imported, say Rs. 11.60.56.285, she would lose at 1*s.* 10½*d.* as against 1*s.* 6*d.* -	2.32.11.257	
On balance of gold imported, say Rs. 2.75.32.303, she would gain at 1*s.* 10½*d.* as against 1*s.* 6*d.* -		55·06·460
On Government remittances she would save, by reduction of present loss, say on Rs. 18.50.00.000, at 1*s.* 10½*d.* instead of 1*s.* 6*d.* - - -		3.70.00.000
	21.15.31.257	22.99.06.460
Balance gain - -		Rs. 1.83.75.203

On remittances for other than Government railways and other private enterprises in which European capital is invested there would also be a saving of 25 per cent. I put no figure to this, as no data exist for doing so, but leave it to those who know India to conceive how large an addition to the gain to India would come from it. ?

It may be objected that the foreign investor, not India, would benefit on these private remittances, but the advantage would be immediately reflected back to India. She would make better terms for the future, and the increased profits of these enterprises would all be in India's favour—say, in the case of railways, in enabling the companies to reduce rates. It is quite proper, therefore, to class these savings as practically a gain to India.

There remains the question, Would the advance in exchange check exports from India? I do not believe that it would affect the total of India's exports to any material extent, if at all. Mr. O'Conor's memorandum, I think, demonstrates that the main cause of the increased supplies of produce from India has been the opening up of the country by roads and railways, and the smaller returns in rupees owing to advance in exchange would be largely compensated by the advance of European prices. As regards the greater part of her produce, she competes with other silver countries, and they would be under the same conditions of competition as she is. As regards wheat, Chicago and New York keep just now too vigilant an eye on the course of silver and Indian exchange not to at once put up prices in response to any upward movement in them.

2478. (*Sir John Lubbock.*) You mean the Indian Government?—I am taking the thing from the standpoint of the Indian Government, because I am meeting the objections of those who think that the restoration of silver would be adverse to India.

2479. That is, the Indian Government?—I am taking India as a whole.

2480. (*Sir T. Farrer.*) If gold has appreciated, it is not only the Government which suffers, but India, which has to pay more?—Yes.

2481. (*Sir John Lubbock.*) How would there be any gain on the Council drafts?—She would not lose: she loses just now 4½ millions on Government drafts. I am taking the balance of India as a whole.

2482. It is quite clear that India as a whole would not lose?—I am taking the balance of account with India. People say, "Well, India will lose upon her "exports." I am taking that fully into account, and working it out upon that basis.

2483. But if silver went up 25 per cent., how would that affect the question of the Indian drafts, as regards India, from your point of view?—The loss would disappear.

2484. It would be there all the same. It would not show in the accounts, but India would have to pay. The Indian Government would not lose the difference, but India would?—I am taking the thing simply as a matter of account. Of course our positions, Sir John, with regard to silver, differ. You are viewing the thing from the English standpoint, and taking gold as the measure of value. India has as much right to view it from her own standpoint, taking silver as the standard of value.

2485. India has to buy 14,000,000*l.* of gold to meet her creditors here. By your hypothesis you alter the value of silver, but not the value of gold; and, so far as India is concerned, she would have to place the same value here as before?—Yes, but it would cost her fewer rupees to do so.

2486. (*Mr. Barbour.*) I suppose you admit that it is extremely difficult to draw up an exact account of what would happen supposing exchange rose?—Yes.

2487. You can only make a series of hypotheses and reason about them?—Yes.

2488. I will read you the following passage from Ricardo:—"Gold and silver having been chosen for "the general medium of commerce, they are by the "competition of commerce distributed in such pro-"portions amongst the different countries of the "world as to accommodate themselves to the natural "traffic which would take place if no such metals "existed, and the trade between countries were "purely a system of barter." Do you agree generally with that?—Yes.

2489. The tendency of trade is to approximate to what it would be under a system of barter?—Yes, but the metals are there as the only measure of price.

2490. And no matter what the rate of exchange might be, the tendency of trade would be to approximate as nearly as possible to that natural course, commodities being exchanged for commodities?—Yes.

2491. But if you have a mechanism of exchange which is faulty, trade may be interrupted?—Yes.

2492. And if you have a good mechanism of exchange your trade will go on smoothly?—Yes.

2493. Therefore it does not matter in the long run what the ratio between gold and silver is. Provided you have a good mechanism of exchange trade will follow as a matter of course?—The great difficulty is the shifting mechanism.

2494. If you have a good mechanism of exchange trade will follow as matter of course?—Yes.

2495. (*Mr. Birch.*) You said "shifting mechanism." What is that?—The two bases of valuations are continually shifting; there is no price apart from metal.

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2496. But in all countries there is always a difference of exchange. It is always varying. You have seen in India a difference between 1*s.* 10½*d.* and 2*s.* 2*d.*, have you not?—Yes, but if we had a common basis of exchange with India we would likely now see very little variation. The rapidity of communication and the action of banks in dealing in exchange tend to minimise exchange fluctuations.

2497. You spoke a short time ago about paper money in South America. Of course the real basis there is gold?—The local variation of prices in Buenos Ayres is due mainly to paper money. We have practically a uniform basis of final liquidation.

2498. Gold or silver?—Gold on the East Coast, in Brazil, or the River Plate with which I am connected.

Witness withdrew.

Adjourned till Tuesday, February 15th.

Eleventh Day.

Tuesday, 15th February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P.

MR. GEO. H. MURRAY, *Secretary.*

MR. HENRY WATERFIELD, C.B., further examined.

Mr. H. Waterfield, C.B.
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2499. (*Sir T. Farrer.*) I gather that you do not think that the fall in exchange has permanently increased Indian exports?—No, I can see no evidence that the increase which has taken place is due to the fall in exchange.

2500. Have not the imports into India, according to the Indian returns, increased during the fall of exchange at as great a rate as, or at a greater rate than, the exports from India?—I hand in a table which shows that up to 1883–84 the increase in the exports was a little the greater, but in the last two years the relative increase has been greater in the imports. (*See* Appendix VIII. B.)

2501. In the table you have put in, the increase of the imports into India in the 10 years is represented by 100 to 154, that of the exports by 100 to 149. There is here no evidence of special stimulation of exports, or restriction of imports?—Quite so. I have prepared these tables in such a way as to take 100 as the standard in the year 1874–75, and the figures which you mention are those shown. The imports rose from 100 to 153 in 1883–84, and the exports to 156; in the next two years imports were at 154, but exports fell back to 148 and 149. The exports, therefore, show somewhat less increase than the imports.

2502. This is, of course, in values, not in quantities?—The values in rupees.

2503. I think you have in these tables, and in all others, put the average rate of exchange for the year opposite the year?—Yes.

2504. Is not what you have said true of the trade with the United Kingdom as well as of the whole trade of India?—In the case of the trade of the United Kingdom with India, the increase in the value of the imports into India has been greater than in that of the exports from India, as will be seen from the next table. (*See* Appendix VIII. C.)

2505. (*Mr. Barbour.*) Has the opening of the canal tended to divert Indian exports to the continent, instead of their coming to England in the first instance?—That is so. In comparing the trade with years before the Suez Canal was opened, we find it necessary to treat Europe as a whole, and compare it with the United Kingdom in former years. A considerable part of the trade which used formerly to go to the United Kingdom, and then to be transferred to the continent, now goes direct to the continent.

2506. (*Sir T. Farrer.*) But the Suez Canal has been open during the whole time, has it not, over which these returns extend?—The Suez Canal was opened in November 1869, but I have no separate returns relating to it till 1875–6. I think, however, that in the earlier years the trade passing through it was not very great, as the steamboat companies had to build ships suitable for the purpose.

2507. Then the effect of the alteration that Mr. Barbour has suggested is that the figures for the United Kingdom for the later years ought on that account to be smaller than they were in the earlier years, because some of the trade which used to be entered as for the United Kingdom now goes direct to European ports?—They would be expected to be smaller.

2508. The increase in the imports from the United Kingdom in the 10 years is represented by a rise from 100 to 147; that of the exports to the United Kingdom by 100 to 121?—The imports increased from 100 in 1874–5 to 147 in 1884–5; the exports rose to 132 in 1883–4, but fell back in 1884–5 to 121.

2509. In the case of the United Kingdom therefore, as well as in the case of the whole of the external trade from India, the trade returns give no support to the theory that the fall of exchange has checked imports from the United Kingdom, or stimulated exports to the United Kingdom?—No, none.

2510. We know that in all these cases the trade is governed by a great number of factors, but at any rate we can say that if the fall in exchange has had any effect in that direction, it must be over-powered by other factors, and be comparatively insignificant?—So it would appear.

2511. I will ask you now to turn to the English statistics. The Indian returns, I think, are all in tens of rupees, are they not, whilst the English are in £ sterling?—That is so.

2512. Therefore, comparing the recent Indian with the recent English figures, must we not bear in mind that, if the Indian figures were to be expressed in £ sterling they must be reduced, and *vice versâ*, with the English figures?—Yes, that is so. When the exchange is below 2*s.* the rupee, the number of tens of rupees is greater than the number of £ sterling, of which they are the equivalent in value.

2513. It has been suggested that the fall in exchange has been a serious obstacle to the trade between England and India as compared with the trade between England and gold-using countries.

Can you put in any figures showing what have been the proportions of trade with India to the whole of the foreign trade of the United Kingdom from 1870 to the present time?—I have a table which I have extracted from the appendix to your own work, entitled "Free Trade versus Fair Trade." (*See* Appendix VIII. D.)

2514. I may just mention that these were some figures I had prepared for the purpose of showing the comparative growth of the trade of the United Kingdom with all the different countries of the world, and I have no doubt of their accuracy. It appears, does it not, that, whereas the per-centage of the trade of India with the United Kingdom was 8·3 per cent. compared with the whole trade of the United Kingdom in 1870, and 7·7 in 1873, it was 9·9 of the whole trade of the United Kingdom in 1883?—Those figures are correct.

2515. The bulk of the trade of the United Kingdom is with gold-using countries?—Yes.

2516. And India is the chief of the silver-using countries?—Yes.

2517. Consequently the figures you have given show that the recent fall in exchange has not prevented the trade with India growing as fast as or faster than the whole of our trade with gold-using countries?—From those tables I find that the trade with India since 1874 has relatively grown faster than that with British North America, the West Indies, or the South African Colonies, but not so fast as with Australia and New Zealand; and also faster than with any foreign country except the United States, and, perhaps, Holland. The inference I should draw is that exchange has little or nothing to do with the matter.

2518. Now, we will turn to the export trade from England, which it has been suggested has been checked by the fall in exchange. Will you look to the English statistics of the last 12 years, and can you put in figures showing the gold value of silver in London in each year, the value of the exports to India, and the value of the cotton exports to India in each year?—I hand in such a table. (*See* Appendix VIII. E.)

2519. Do these figures show that the export trade from England to India has been checked by the fall of exchange?—No. There has during the last 12 years been a large increase in the value of the exports from England to India.

2520. The total trade, I think, from England to India was represented by 100 in 1874 and by 122 in 1885?—Yes.

2521. And of cotton, of which we have heard a great deal, the numbers were as 100 in 1874 to 134 in 1886 in quantity and 96 in value?—Yes. I may, perhaps, point out that that fall in value occurred since 1883. For the years from 1880 to 1883 the corresponding figures in value were 107, 110, and 105; therefore, up to that time there was an increase in value also.

2522. During the last year there has been one of the heaviest falls on record, nearly 2*d.* in the rupee. Do the English trade accounts show any great increase in the imports from India or decrease in the exports to India?—No, not on the whole, though in particular articles there has been a great deal of variation. Imports of raw cotton in 1886 as compared with 1885 have increased by 41 per cent. in quantity and 27 per cent. in value; tea by 18 per cent. in quantity and 15 per cent. in value; wool by 34½ per cent. in quantity and 28 per cent. in value; flax and linseed by 7 per cent. in quantity and 2 per cent. in value; and hides by 8½ per cent. in quantity, the value remaining unaltered. On the other hand, wheat fell by 9 per cent. in quantity and 13½ per cent. in value; leather by 6 per cent. in quantity and 4 per cent. in value; and rape seed by 40 per cent. in quantity and 47 per cent. in value. Turning to the exports to India, I observe in cotton piece goods an increase of 27 per cent. in the quantity and 19½ per cent. in the value; in cotton twist and yarn, an increase of 12 per cent. in the quantity and 9 per cent. in the value; while in the value of the exports of iron and steel of all kinds there is a reduction of 7 per cent.

2523. The different articles vary according to their own different factors?—Quite so.

2524. But on the whole there is no such rule as I have suggested?—No.

2525. (*Mr. Houldsworth.*) Might I ask whether the figures of the export of bullion are included in the totals that you have given us?—No, the totals which I gave for trade are the totals of merchandise only.

2526. (*Sir T. Farrer.*) Looking to the January number of the Trade Accounts for the present year, 1887, does it not appear that the figures are as follows for 1885 and 1886 in round numbers: Imports from India in 1885, 31,900,000*l.*; in 1886, 32,100,000*l.*?—An increase of 200,000*l.*

2527. While the exports to India were in 1885, 29,300,000*l.*, and in 1886, 31,300,000*l.*, or an increase of 2,000,000*l.*?—That is so.

2528. As against the 200,000*l.* increase in the imports from India?—Yes.

2529. That does not look as if there had been any very great restriction upon exports, or any stimulation of imports?—No.

2530. (*The Chairman.*) Is the diminution of the export of wheat due to an exceptionally small harvest in India?—No, the harvest was a good one. I think it was more dependent on price.

2531. (*Sir T. Farrer.*) Complaints have been made from Lancashire that the fall in exchange has specially injured the export trade in cotton manufactures, and especially to India. You have given some figures already. Will you now turn to the first report of the Commission on the Depression of Trade, Appendix, page 143. In that there is a table giving the quantities of piece goods and of yarns exported to various countries, and the proportion the quantity exported to each country bears to the whole exports. Do we not find that in 1870 the cotton piece goods exported to India were 923,000,000 yards, and 28·4 per cent. of the whole of the exports?—Yes.

2532. Do we not find that in 1884 the number of yards of cotton piece goods exported to India was 1,791,000,000?—Yes.

2533. Or about double the actual quantity, and as regards proportion, 40·6 per cent. of the whole of the exports as compared with 28 per cent. in 1870?—That is so. The figures are taken from Messrs. Ellison's Review of the Cotton Trade for 1884.

2534. Then going to cotton yarns, of which I think we have heard even more than piece goods, do we not find that the exports to India in 1870 were 31,000,000 lbs. or 16·5 per cent. of the total exports?—Yes.

2535. Whilst in 1884 the cotton yarns exported to India were 49,000,000 lbs. and 18·1 per cent. of the whole exports?—That is so.

2536. Consequently, when it is stated that the export trade of England to India and other silver-using countries, and especially that of cotton, has suffered greatly by the fall in exchange, the facts shown by the returns do not bear out the statement, since the trade has increased very largely during the fall in exchange?—No, they do not.

2537. (*The Chairman.*) And has increased relatively more with regard to silver-using countries than it has with regard to the whole exports?—So it would appear.

2538. But still that fact has not been actually worked out in figures?—No, I have rather refrained myself from making a calculation in that way, owing to the difficulty in saying what is a gold-using and what is a silver-using country. The countries are divided by different statisticians in different ways, and therefore in the figures I have given in reply to Sir Thomas Farrer's questions, I have calculated the proportion to the general trade.

2539. (*Sir T. Farrer.*) The state of the English export trade does not, therefore, from these figures appear to call for any violent remedy, much less for

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any alteration of our currency laws, which would take from India such advantage, if any, as she may derive from her silver currency?—No, I think not. Perhaps I may mention that I was asked last time to prepare a table for the Indian trade with the silver-using countries, and I have therefore prepared this diagram showing the quantity and value of exports of Indian merchandise to the silver-using countries in the East, together with the rate of exchange.

2540. To turn back to the effect of the fall in exchange upon Indian manufacturers, it has been stated that Indian manufacturers have an advantage in competing with English manufacturers, because the fixed charges of the Indian manufacturers, being in silver, remain the same, whilst the fixed charges of the English manufacturers, being in gold, rise with the rising value of gold. For instance, I do not know whether you have seen the evidence that, whilst the English manufacturer has to pay in gold his rent, his taxes, and possibly his wages, the Indian manufacturer has to pay no more rent, wages, and taxes, and therefore has an advantage. Do you agree with that?—I think that Indian manufacturers of the coarser cotton goods have considerable advantages in competing with English manufacturers, for the China trade, for instance, in their proximity to the districts where the cotton grows, and in the cheapness of labour, and to these I should add the advantages to which you refer, in so far as it is a fact that the charges of the English manufacturers are fixed in gold. But, while I may take interest on capital, perhaps, as being so fixed, the price of the raw material, and, I suppose, also the rate of wages, must be taken as not so fixed, and, therefore, in that respect, I should say that the English manufacturer has no special advantage.

2541. At any rate, you would find it extremely difficult to ascertain what advantage, if any, to the Indian manufacturer is due to each of those factors?—Quite so.

2542. (*The Chairman.*) The contention of the witness to whom you are alluding was that wages in England had not altered with the altering value of gold. Wages in England would, I suppose, sooner or later alter if the value of gold was altered?—Yes, but they may not have so altered at present.

2543. (*Sir T. Farrer.*) It has also been suggested to the Commission that the Indian manufacturer has a further advantage from the fall of exchange in selling his goods, because in selling to a silver-using country the exchange is not altered by the fall, and because in selling to a gold-using country the buyer, for the same quantity of gold, gets a larger amount of silver, and, silver prices remaining steady, a larger quantity of cotton goods. Now I should like to ask you whether there is not a fallacy in this. The demand in either case being for a certain quantity of cotton goods, the purchaser in silver will give the same quantity of silver as before; the purchaser in gold will give a smaller quantity of gold, but, gold having risen in value, he gives a smaller quantity for the same goods, but that quantity will be the same whether he has to buy silver to purchase the cotton with or pays gold directly for the cotton?—Yes. I think you are right. The gold and silver are only measures of purchase, and the holder of gold will give the same value of gold as before, though, perhaps, a less quantity, and the gold he gives will not be affected by passing intermediately through silver. If the argument were correct, there should be a large export of Indian manufactures to gold-using countries, which is not the case.

2544. It makes no difference to the gold purchaser, whether he buys his cotton direct with the gold, or whether he buys it by buying silver first, and then cotton. He gives the same quantity of gold and gets the same quantity of cotton in either case?—Yes.

2545. It is true, is it not, that the exports of cotton yarns and piece goods from India to China are increasing largely?—Yes; including Hong Kong, the exports of twist and yarn to China were 56,469,000 lbs. in 1884–5, and 68,499,000 lbs. in 1885–6; and those of piece goods were 2,657,000 yards in 1884–5, and 3,222,000 in 1885–6. The total value was 2,115,000 tens of rupees in 1884–5 and 2,443,000 in 1885–6.

2546. Now, I will ask you to turn back to the Appendix to the first report of the Depression of Trade Commission, page 143. You have already shown from that return that the export trade of Lancashire with India has increased largely during the fall in exchange. The same return contains an account of the export trade of Lancashire to China, Java, &c. Does it not appear from that return that the export from the United Kingdom to those countries of cotton piece goods had increased from 478,000,000 of yards in 1870 and 526,000,000 in 1875 to 600,000,000 in 1884?—Yes, that is correct. The trade increased even more largely up to 1881, but has declined since.

2547. And that the exports of cotton yarn to those countries had increased from 20,000,000 lbs. in 1870 and 29,000,000 in 1875 to 39,000,000 in 1884?—Yes, I find that the exports of 1884 were 14 per cent. in piece goods and 32 per cent. in yarn above those of 1875.

2548. So that, whilst India has been doing much, Lancashire has been doing more than she did before?—Yes.

2549. Then I will ask you, do these figures justify the statement that the present state of things, that is, the fall in exchange, is causing the gradual transfer of the yarn trade of China to India, that the exports from England have steadily declined since the fall of silver commenced, whilst those from India have enormously increased?—The increase of the imports from India may, indeed, be termed enormous; but it is not correct to say that the exports from England have steadily declined since the fall of silver commenced; and I think, as I have already said, that the fall in exchange is not the cause of the improvement in the Indian trade.

2550. At any rate, you would not see in these figures any reason for protecting Lancashire against India by a radical alteration of our currency system?—No; I should think it as objectionable as allowing any protection of India against Lancashire.

2551. So much for the English export trade to India. As regards the import trade from India, you have already given figures which show that, as a whole, it has not been unnaturally stimulated by the fall of exchange; but a very general impression prevails that it has been so stimulated, and especially that the fall in the price of Indian wheat caused by the exchange is ruining English, French, and American farmers. This view is supported by many authorities, and I should like to read to you what some of them have said. Let me read to you from an article of M. Laveleye in "The Contemporary Review" for May 1886. He says:—"The excessive fall in the "value of silver is a new and quite special cause of "suffering for the agricultural world. Baron de "Soubeyran laid this matter before the French "Chamber in a speech delivered on February 8, 1886, "in which he shows that Indian-grown corn attains "a premium of more than 20 per cent. when imported "into Europe. He thus expresses himself:—'Silver "'is the only legal tender in India. An ingot of "'silver is bought in London at the current price, "'46⅝*d.*, sent to Calcutta, and coined at the mint "'there, and with the produce of the coining of this "'ingot you purchase corn which you forward to "'London or Havre. There this is worth about "'13·70 frs. the hectolitre, all expenses paid. If, "'on the contrary, the silver ingot, instead of "'costing 46⅝*d.* or 170 frs. the kilogram, its present "'price, cost 60¾*d.* or 220 frs. the kilogram, its real "'worth, the hectolitre of corn ought then to be sold "'in London, Antwerp, or Havre at a price varying "'from 18·50 frs. to 19·50 frs.; that is to say, that "'in all these ports it would be from 4·75 frs. to "'5·50 frs. dearer than now.'" I will read you also a passage from the annual report of the Secretary

of the Treasury of the United States on the state of the finances for the year 1886:—"It is a direct consequence of the monetary dislocation that wheat of "India, which there fetched 3 rupees per quintal "14 years ago, and there fetches 3 rupees per quintal "to-day, can be sold in London (cost of transport "apart) for as little as the gold price of 3 silver "rupees of India in London to-day, a fall of 25 per "cent. This fall has caused, of course, a corresponding fall in the price of English and Irish home-"grown wheat in London. This lowered price of "wheat in London has had to be met by a lower "price of the American wheat surplus sold in London. "The price of our surplus wheat determines the "price of the whole wheat crop of the United States. "So that the monetary dislocation has already cost "our farming population, who number nearly one half "the total population of the United States, an almost "incomputable sum, a loss of millions upon millions "of dollars every year, a loss which they will continue to suffer so long as the Congress delays to "stop the silver purchase, and by that act to compel "an international redress of the monetary dislocation. "Another year's delay in stopping the silver purchase "is the loss of remunerative prices upon another "wheat crop of the United States; is another year's "stimulus to India's competition for the foreign "markets of our agricultural product, and a reduction "of our ability to hold that market against any competition in the world (measured by a common "money)." Now that is an authoritative document. I should like to ask you whether you agree with it?—I think that M. Laveleye's article omits to take account of the check in the first instance given to the exports from the East by the fall of the gold price in Europe; in my view, the fall in exchange is the counterpoise without which the trade could not be carried on at the lower gold price; but I see no benefit to the Indian trade in the low prices and low exchange. In the report of the Secretary of the Treasury in America it is said that the fall in exchange has caused the fall in the gold price of wheat, which appears to me to involve a confusion of cause and effect.

2552. You think that the fall in the gold price of wheat, and of silver, is the first thing, and the fall in Indian exchange a consequence?—I do.

2553. I should like to ask you parenthetically whether there is any reason for supposing that Indian wheat rules the English market more than American, or Russian, or English wheat?—I presume that the price is regulated by the wheat which can be brought into the market most cheaply in sufficient quantity; but I am quite unable to say from what country it comes.

2554. And probably nobody can say?—I should think not.

2555. When was the Indian export duty on wheat taken off?—It was taken off at the beginning of 1873.

2556. Was it taken off since this fall in exchange, or just before?—No, just before.

2557. It was 5 per cent., I think?—It was 3 annas on the maund of 82 lbs.; which is about 4 annas a cwt. The average declared value of wheat exported from India in 1881-2 and 1882-3 seems to have been about 4 rupees 6 annas a cwt.; so that the duty was at that time nearly 6 per cent.

2558. Do not the figures which you have given, and which are given in Mr. O'Conor's paper, show that there have been real causes at work in India, and in the cost of carriage on the ocean, which account for increase in Indian exports, and for the fall in gold prices?—To a great extent it is so.

2559. I should like to take one illustration from Mr. O'Conor's paper. Does he not say that between 1872-3 and 1885-6 the gold price of Indian wheat in London fell 33·7 per cent.?—Yes.

2560. And that in the same year the silver price of Indian wheat in Calcutta had fallen 26 per cent.?—Yes.

2561. The fall in the silver price in Calcutta must have been independent of any fall in exchange?—Yes.

2562. Does not Mr. O'Conor further tell us that since 1870 the sea freight of wheat from Calcutta to London had fallen upwards of 50 per cent., making a further reduction in the gold price of wheat in London of 10 per cent. or over?—Yes, I think he puts it at 10 to 13 per cent. since 1873.

2563. These reductions in real cost of production fully account for this reduction of the gold price in London, do they not?—I think Mr. O'Conor himself does not admit that they fully account for it. They certainly account for a great deal.

2564. If you add the figures, they more than account for it?—Yes; but I have a paper of his in which he says that the reduction in the gold price greatly exceeds the reduction in the silver price plus the reduction in the cost of freight.

2565. Well, upon those figures, which I have taken from his paper, the difficulty is to understand how, taking into consideration the fall of exchange, the reduction of the gold price in London was not still greater than it was?—Yes, but you are speaking of only one article.

2566. (*Mr. Barbour.*) In 1870 was there practically no wheat trade between England and India?—No, there was no trade worth mentioning until two or three years after the Suez Canal was opened, about 1873.

2567. (*Sir T. Farrer.*) But you agree entirely that there have been real causes at work for the reduction of the cost of wheat in India, which will account for a very large part of the reduction of prices?—For a very large part, yes.

2568. I will not trouble the Commission with further details of prices, which are difficult and delicate matters to deal with, but I will put into your hands the following extract from a paper from a trustworthy source, with comments upon it, which seems to me to illustrate very well the way in which merchants are in the habit of attributing to the mere mechanism of exchange rises and falls in value which are really due to more substantial causes:

"In June 1881 and June 1886 the price of Cawnpore wheat in Calcutta was Rs. 2·9 per maund, but the rate of freight was 60*s.* a ton in 1881 and 30*s.* in 1886, a difference of 30*s.* a ton, or 6*s.* 6*d.* a quarter.

"The cost of wheat in London was 42*s.* a quarter in 1881 and 31*s.* 6*d.* in 1886, or 10*s.* 6*d.* a quarter difference. Of this difference freights as shown above concede 6*s.* 6*d.* a quarter, which leaves 4*s.* a quarter to be contributed by the fall in exchange and other contingencies.

"In June 1881 the rate of exchanges was about 1*s.* 7¾*d.* per rupee three months' sight, and in 1886 about 1*s.* 5¼*d.* per rupee three months' sight, which represents a reduction of 3*s.* 6*d.* a quarter, leaving only about 6*d.* a quarter unaccounted for, and this further reduction is probably owing to the decline in the price of gunny bags.

"From this it will be seen that in Calcutta prices were at the same level in 1881 and 1886, and yet apart from freight influences, we were able to sell in London at 3*s.* 6*d.* less money."

The above is the statement made by the merchant, and his inference seems to be that the Indian exporter has made a profit by the alteration in exchange and has by that means lowered London prices.

It is an interesting case and worth examining. The observation that 6*s.* 6*d.* out of the difference in price is due to lowering of freights is very suggestive.

The fall in price in London has been 10*s.* 6*d.* a quarter, but the merchant who knows the facts does not state that the whole of this is due to exchange. He attributes two thirds of this to diminution in the cost of production and transit, leaving only 3*s.* 6*d.* out of the 10*s.* 6*d.* to be accounted for by exchange. But we have the means of tracing this a little further. Mr. O'Conor in the paper above referred to tells us that between 1879 and 1886 the charge for grain on the East Indian Railway between Cawnpore and Cal-

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cutta (684 miles) had fallen from ·177 pies per maund (82 lbs.) per mile to ·149 pies, which would amount to about 2*s.* a quarter. In this way 2*s.* out of the 3*s.* 6*d.* is accounted for without reference to exchange, and it may well be that more than 2*s.* would be thus accounted for.

But for this diminution in the cost of Indian production, the Calcutta price would have been so much the higher and the English price would have been higher also. As it is, the diminution in the cost of production in India, coupled with the diminution in freights, very nearly accounts for the whole reduction in English prices. The figures do not correspond precisely with Mr. O'Conor's figures either in dates or in amounts, and they are not so striking, but they confirm the general conclusion that the fall in the price of Indian wheat is to be accounted for in the main, if not altogether, by diminution in the cost of producing and carrying wheat, and not at all by gold.

I will ask you to say whether you have any observations to make on this statement?—I think that the increased supply caused by the development of the country through the opening of railways, and the reduction in the cost of transport, have had a material effect on the prices of commodities in Europe; but I do not think that they fully account for the fall in those gold prices, or that the fact should be ignored that the supply of gold has not increased in proportion to the increased demands made upon it in recent years.

2569. I will only ask you further with regard to wheat exports from India, as I have asked you with respect to cotton goods, whether there is anything in these facts to justify either the American Government or European economists in demanding an alteration of our currency system in order to prevent the Indian ryot from competing with European and American farmers?—No, I think not.

2570. Now I want to ask you some rather more theoretical questions with regard to the effect of the fall in exchange. Do you think it possible that an alteration in the par of exchange can make a permanent change in values or in real prices, or can permanently and seriously affect trade?—Taking silver and gold money to be merely a means of conveniently effecting an exchange between the commodities of one nation or person and those of another, I do not think that an alteration in the par of exchange between silver and gold can permanently affect the real prices of commodities or the trade.

2571. For instance, in the case of a country possessing an inconvertible paper currency, a large over-issue would alter nominal prices and nominal exchange seriously, but the change would be nominal only?—Nominal.

2572. There has, I believe, been lately a large fall in the Russian exchange. Has that fall affected trade seriously, or stimulated the export of Russian wheat?—I have no knowledge of the special circumstances which affect our trade with Russia, but I see from the returns that the exports from the United Kingdom to Russia fell continuously from 1880 to 1885, in which year their value was as low as in 1877, and only 57 per cent. of the value of such exports in 1880. The imports of wheat from Russia into England show remarkable fluctuations, and I can see no ground for thinking that they have been affected by exchange. Taking the later years, the number of hundredweights received was in 1880, 2,880,000; 1881, 4,047,000; 1882, 9,576,000; 1883, 13,347,000; 1884, 5,402,000; 1885, 11,976,000; and 1886, 3,710,000.

2573. Then is there not this difference between a mere alteration in the par of exchange caused by depreciation of the coinage or an over-issue of paper money on the one hand, and the alteration caused by a fall in the value of silver, on the other, such as has recently occurred in America and Europe,—that in the former case the only change would be a change in nominal prices, whilst in the latter case silver would go from London or America to the East, and would have to be paid for by increased exports from the East?—Yes, I think so.

2574. You have, I think, put in a table showing in detail the imports of silver into India. Have these imports corresponded with the fall in exchange, that is, have the larger imports of silver universally or generally accompanied or followed falls in exchange?—I have not been able to see that there is any special agreement in that way. I hand in a table for the last two years showing month by month the exports of silver to India, and I have put, side by side, the sale of bills by the Secretary of State, and it appears to me that the quantity of bills which the Secretary of State puts on the market governs the amount of silver exported to India to a great extent. I have also added the monthly exports of cotton manufactures to India, as this may be useful to the Commission for the purpose of comparison. (*See* Appendix VIII. F.)

2575. Council bills or telegraphic transfers are an order for payment of silver in India, are they not?—Yes, payment of coined rupees.

2576. Consequently, for the purpose of remittance, they answer the same purpose as silver, and they are cheaper than silver?—Yes, the freight and mintage is saved.

2577. Consequently, for the mere purpose of remittance, council bills will be preferred to silver *ceteris paribus*?—Quite so.

2578. But if silver falls in value in London, that is to say, if it will fetch a smaller amount of commodities in London than it will buy in Calcutta, the silver will go from London to Calcutta, council bills or no council bills?—If the silver is in London, it will go.

2579. That is to say, if the silver has become superabundant in London or America, so that it will purchase less in London or America than it will in India, it will go to India, council bills or no council bills?—Yes, the silver will go to the place where it is most valuable.

2580. Consequently, we ought to find some increased export of silver to India when there has been a great fall in exchange, council bills or no council bills?—Yes, that would be the natural tendency.

2581. (*Mr. Cohen.*) Would it not be the case that the holders of silver would not sell it at that price; they would hold it back?—You are speaking of holders of silver in London?

2582. Yes?—I think our experience is that they must sell; that they very seldom can hold back, and they sell, therefore, under the price of the bills, and thereby force down the exchange.

2583. (*The Chairman.*) Any increase of the export of silver to India would, of course, be immediately followed by, in fact, would depend on, a corresponding increase of exports from India?—Yes, it must be paid for.

2584. (*Sir T. Farrer.*) I gather that in one case, 1876-7, 1877-8, a heavy fall in silver was accompanied by a large export of silver to India, and a rise of prices, but that there was another cause at work, namely, the diminution in the council bills on India?—Silver did go to the East to an exceptionally large amount in 1876 and 1877; and prices in India rose from 1876 to 1879, since which time, particularly in the last year or two, there has been a tendency to fall. I think, however, that the prices were greatly affected by the famine in 1877 and 1878, and that the exports of silver were mainly stimulated by the reduction in the Secretary of State's drawings; during the three months from February to April 1876, in the height of the usual export season, only 53 lakhs of bills were sold, and again in February and March 1877, the sales only amounted to 126½ lakhs.

2585. The council bills so affect the whole concern that it is very difficult to trace the real cause of the export of silver?—I think so. The amount is so large that it to a great extent rules the market for the moment.

2586. (*Mr. Barbour.*) You mean, rules the market for the time being?—For the time being.

2587. You do not think on the whole it has very

much effect?—No, in the course of a series of years it passes away.

2588. (*Sir T. Farrer.*) And it would not prevent silver going to India, if silver itself were more valuable in India than in London?—No. The silver would go out, though, perhaps, not at the moment.

2589. I understand that in 1883–4, 1884–5, and 1885–6 there were large exports of silver to India, probably from the same cause?—In 1882 and 1883 the exports amounted to about 6,000,000 annually, in 1884 they rose to 7,500,000, and in 1885 were 7,000,000.

2590. Now will you turn to what happened this last year. There was a heavy fall in the gold value of silver, amounting to something like 2*d.* in the rupee. If this meant that silver had fallen in real value in London, you would expect a large export of silver to India as the consequence? As a matter of fact, the exports of silver from this country, according to our accounts last year, were much less than in the preceding years, when there had been no great fall in exchange?—Yes.

2591. From the paper you have put in it appears that there was no specially large import of silver into India in 1886; that the largest import took place in February before the fall in exchange, and that the amount of silver sent to India was two millions less than in the preceding year when there was no fall in exchange, and that, taking council bills and silver together, the remittances to India were half a million less than in the preceding year?—About that.

2592. Consequently the fall in exchange had apparently no effect last year in sending silver to India? Yes.

2593. This goes far, does it not, to support your view that the alteration in exchange is due to a rise in the purchasing power of gold, rather than to a fall in the value of silver?—I think it does.

2594. You know what Mr. Bagehot has said on this subject. Has he ever given countenance to such a notion as is expressed in the extracts I read to you?—Mr. Bagehot held that the fall in exchange would give a temporary, but only a temporary, encouragement to exports from India to England, and discouragement to exports from England to India.

2595. Did he not say, practically, that the immediate effect of a fall in the gold price of silver, arising from a superabundance of silver, would be an export of silver to the East, followed by a slight rise of prices in the East, and that then the trade would go on as usual?—Yes; he held that the fall in exchange would enable merchants to export goods from India with greater profit, while the exporter of goods from England would be at a disadvantage, that a void would thus be created in India which would have to be filled by silver, the consequence of which would be an increase of prices in India and a general improvement of trade resulting from this increase of prices, and that, when that rise of prices should take place, the encouragement to exports from India and discouragement of imports into India would cease, and all trade would go on as it did when it was at its old value.

2596. Did he not say that silver would under such circumstances go to the East, in consequence of an alteration in the balance of trade causing an outflow of bullion in the usual well-known way?—Yes, that was his view.

2597. And did not the report of the Silver Committee supplement this, by pointing out that under such circumstances silver would go to the East, whatever might be the balance of trade?—Yes; the Select Committee pointed out that, even if there should be no excess of exports over the amount needed to pay for the imports and the Government payments in England, it did not follow that the import of silver would absolutely cease, since the demand for silver might displace some of the other articles imported.

2598. But this operation, whether it took place in the one way or the other, would be temporary only; silver would go at once, and then, the new level being reached, trade would go on as before. That was the view of Mr. Bagehot and the Silver Committee?—Yes; and, as it appears to me, the level is so quickly reached that the increase of exports due to a fall in exchange does not perceptibly affect the transactions of the year in which the fall occurs.

2599. (*Mr. Barbour.*) Is the level reached in practice by a rise in silver prices, or a fall in gold prices?—By a fall in gold prices.

2600. And Mr. Bagehot did not contemplate a fall in gold prices?—No; I think that was the point he overlooked.

2601. (*Sir T. Farrer.*) And did not what Mr. Bagehot predicted actually happen? Did not silver go to the East in 1877–8?—Silver did go to the East in an exceptionally large amount in those two years.

2602. Indian prices are very difficult to follow, are they not? They rise very slowly. India is so large a country that it is very difficult to form any general conclusion as to a rise of prices in India?—It is very difficult, owing to the very large extent of the country, and the extent to which the particular districts are affected by the seasons.

2603. Then Mr. Bagehot gave no countenance to the doctrine that a permanent alteration in the real value of Indian goods, or of English goods, or of the trade between the two countries, could be the consequence of an alteration in the relative values of gold and silver?—No, he stated distinctly that the effect on trade would be temporary; and that the rise of prices in India, which he anticipated, would not do more than withdraw the exceptional encouragement which the fall in exchange had given.

2604. Mr. Bagehot did not apprehend what has since happened, namely, continued falls in the exchange unaccompanied by any specially large imports of silver into India; by any rise of Indian prices; or by any special increase of exports from or diminution of imports into India?—No, he thought that the disturbance to the trade would be corrected by a rise of prices in India, not by a fall of prices in Europe.

2605. The facts that I have stated in that last question are, according to your evidence, the present real facts of the case, are they not?—Yes, I think so.

2606. (*Mr. Birch.*) Prices have not gone up in India?—No, prices of exported goods have slightly fallen; but speaking generally, they have been nearly stationary, as far as we can judge, but, as I said just now, it is very difficult to decide on the movement of prices in India.

2607. (*Mr. Barbour.*) Do you think prices have fallen permanently in India, or that the recent fall is due to the seasons?—I think it is probably due to the unusually large number of good seasons.

2608. (*Sir T. Farrer.*) Do not these circumstances point to a cause or causes entirely different from that which Mr. Bagehot and the committee of 1876 were contemplating, namely, a superabundance of silver only; and do they not rather point to an increase in the purchasing power of gold?—Yes, I think so. Mr. Bagehot saw that gold might, perhaps, have risen in price, but he thought this was to be attributed merely to the cycle of prices, and would soon pass away, and that it must not be mistaken for appreciation due to diminished production, or, I presume he would have added had it occurred to him, to increased demand.

2609. If this were the case, that is, if the relation of silver to commodities remained the same, whilst the relation of gold both to silver and to commodities were altered, there would no longer be an inducement to export silver to India upon the fall of exchange?—No.

2610. In that case the exporting English merchant would receive for a certain quantity of goods, say, 10 rupees, which he would change into 15*s.*, where before the fall in exchange he would have received 1*l.* for the same goods. But the 15*s.* will be worth as much as the 1*l.* was before?—Yes, in commodities.

2611. And the exporting Indian merchant would receive only 15*s.* for his goods where he received 1*l.*

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before, but his 15*s.* will buy 10 rupees just as the 1*l.* did before?—Quite so.

2612. Assuming this to have been the case, it would account for a fall in exchange unaccompanied by the consequences to trade foretold in 1876?—Yes, the consequences to trade.

2613. Now, then, we will go to the causes of the increased purchasing power of gold. The supposed increase might arise, might it not, either from a scarcity of gold, or from the production at reduced cost of the commodities against which gold is exchanged?—Yes; assuming the cost of production to be reduced in the case of all the commodities in respect of which the purchasing power of gold had been increased.

2614. That is to say, supposing the purchasing power of gold to have been increased generally?—Quite so, that is my meaning.

2615. But the purchasing power of gold against a particular commodity may be increased by the production at a diminished cost of that particular commodity?—Yes, by quite another series of factors.

2616. Suppose, for instance, that gold has become scarcer, whilst all other commodities, silver included, remain constant, then, putting aside the question of fixed charges, the only change will be that a smaller quantity of gold is given and received by the merchants, the number of rupees and the quantity of goods remaining the same as before. In this case the only change will be a change in nominal gold prices, and except to this extent trade will not be affected?—Quite so.

2617. But the increase in the purchasing power of gold may be due to another cause or other causes, namely, to the production or delivery at reduced cost of the commodities against which gold is measured. Suppose, for example, that the only commodity we are concerned with is wheat. Then, if the cost of the carriage of wheat from India to England is reduced, other things remaining the same, the gold price of Indian wheat in England will fall, and the silver price of wheat in India will remain constant?—Yes.

2618. If in addition the cost of carriage and shipment in India is reduced, silver remaining constant, the silver price of wheat at the ports in India will fall, and the gold price of wheat in England will fall still more than in the case previously supposed?—Yes.

2619. Whilst, if at the same time silver becomes more abundant in proportion to the demand, wheat and silver will fall together as against gold, silver prices in India will remain the same, and the fall in the gold price of wheat, though really due to reduction in the cost of conveyance of the wheat, may appear or partly appear in the exchange as a reduction in the gold value of silver?—Yes; I think that your reasoning is correct in theory.

2620. This, of course, is a hypothetical case, and the other cases of the superabundance of silver and of the scarcity of gold are hypothetical cases, and probably no one of them comprises the whole of the actual case. But do they not illustrate the truth that the essential factors, the *veræ causæ*, in the reduction of real prices or values are, as you have stated, reductions in the cost of production, or rather, in this case, of transport, and not in the relative values of silver and gold?—By real prices or values of the exported commodities, I understand you to mean the amount of commodities received in exchange, as distinguished from the measure of the commodities expressed in money; and in this sense I agree with your opinion, from a trading point of view, since any rise in the value of gold may be discounted as equally affecting commodities given and received. But the object with which I have been desired to give evidence before the Commission is to represent the position of the people of India acting through the Government, and in their case that which they receive in exchange for their surplus commodities is the use of English capital and English agency, for which interest on debt, pensions, &c. have to be paid. And to ascertain the real price paid for these, it is essential to include as a factor the rise in the value of gold which may have been caused by the additional demand thrown upon it in recent years having exceeded the supply.

2621. Quite so, but then I would ask you a further question or two. If the rise in the purchasing power of gold has arisen from a scarcity of gold, which did not exist when the English capital was advanced, then it is true, no doubt, that the increased purchasing power of gold has thrown a burden, in the shape of interest, on India greater than that which it undertook when the capital of her debt was advanced?—Yes.

2622. But, supposing that the increased purchasing power of gold is due, not to a scarcity of gold, but to a reduction in the cost of production of commodities, then India, if she produces these commodities with a smaller amount of effort or labour than before, will, to that extent, be relieved from any additional charge incurred by her in paying the interest on her gold debt at its increased value, is that not so?—Yes, if she is producing the commodities with less labour, she will get some return for the increase in the price of gold which she has to pay.

2623. She will have a larger amount of commodities to pay; but she will have for the same labour a larger amount of commodities out of which to pay them?—Assuming your hypothesis.

2624. If, for instance, wheat was the only commodity produced in India, and if by means of the railways which have been made with borrowed capital the cost of the delivery of wheat were reduced as much as gold has risen in value, India would incur no additional burden finding as much wheat as would be necessary to pay the increased interest on her gold debt?—If I follow your question, it is not only the cost of delivery of wheat, but the cost of cultivation that must be reduced correspondingly.

2625. I put them together?—Supposing the cost of cultivation and delivery were reduced, that would be so.

2626. Wheat is only one of many things which India sends us in order to pay the interest on her debt?—Yes.

2627. But they are mostly agricultural produce, are they not?—A very large portion.

2628. And, therefore, largely dependent on the railways which have been made with borrowed money?—Yes.

2629. They are also, are they not, largely dependent on special causes, such as good or bad harvests?—Yes, very largely.

2630. Consequently, before determining that the increased value of the gold debt is an increased burden on India, would it not be necessary, under the above circumstances, to see in the case of each article how much of that increased value is due to gold itself, and how much to the increased abundance of the articles themselves in which India pays her debt?—I do not think it would be possible to do so.

2631. It therefore needs a good deal of examination, before we can conclude that an increase in the value of the interest which India has to pay on her gold debt is a real increase of the burden on the people of India?—It requires careful examination, undoubtedly.

2632. And when it is considered that the debt was in a large measure incurred for the purpose, and with the result, of increasing these facilities of production and transport which have helped to raise the value of gold, our doubts concerning the increase of the burden, or the injustice of that increase, are strengthened?—The extent of the increase of the burden; I do not wish to say anything about the injustice of it.

2633. At any rate, so far as the real burden of the debt is concerned as distinguished from the inconvenience to the Government?—Exactly.

2634. I want to ask you this further question with regard to the real burden of the debt. How does the position of India as a gold debtor differ from that of other gold debtors, Australia, for instance? These

colonies have a gold debt varying from 150,000,000*l.* to 200,000,000*l.*, yearly increasing. If gold rises in value, the interest on their debt continues to increase in value, does it not?—Your inquiry is with reference to the Government?

2635. I am not speaking of the inconvenience to the Government, I am speaking of the burden upon the people of India?—The essential difference in that case seems to me to be that, in the case which you have taken of Australia, it is a gold-producing country, and therefore, if a rise occurs in the value of gold in Europe, there is a corresponding improvement caused by that in the value of her commodities that she exports.

2636. Therefore Australia would be in the same position as India when she has more wheat to pay her debt with?—No, the same quantity of gold which Australia produces rises in value relatively to all prices in Australia which are gold prices.

2637. Do not let us take Australia. Let us take a colony which does not produce gold, say Canada, which has a large gold debt in this country. In what respect is the increase of the gold a greater burden upon India than it is upon Canada?—As a country I do not know that it is differently affected by it. The commodities will have to be valued in either case.

2638. (*Mr. Cohen.*) Would it not be a greater burden to India than to Canada, if since the time that the loan is raised for India there had been a fall in silver, because the money remitted to India would be at that time in a currency which had not become depreciated, but which subsequently became depreciated; therefore, if at the time the loan was raised the rupee was at 1*s.* 10*d.*, and it has fallen to 1*s.* 6*d.* meantime, there would be that increase of burden on the inhabitants of India which the inhabitants of Canada had not been subjected to, because they had not been subjected to the intermediary depression in the currency. Is that not the case?—I understood Sir Thomas Farrer's point to be that of the value of the commodities.

2639. (*Sir T. Farrer.*) Assume this, that the whole alteration in value between gold and silver is due, not to the fall in silver, but to an increase in the purchasing power of gold, then in that case I want to know in what respect is India, putting aside the inconvenience to the Government and looking only to the burden on the country, worse off than Canada?—I cannot admit in this context the distinction which your question seems to imply between the Government and the inhabitants of a country; in India, for instance, the inhabitants have to pay taxes sufficient to meet the charge for the remittance of the annual sterling sum which the Government on their behalf have contracted to pay. But, taking your view, I agree that on the same amount of debt the purely economical burden would be as much enhanced in Canada as in India, because both countries would have to give a larger amount of commodities in order to pay their gold debts. Though the purely economical effect, however, may be the same, the actual effect on the community is widely different, since in the case of Canada the additional burden caused by the increasing weight of the gold debt falls directly on and is distributed over the producers and manufacturers of articles of export without the intervention of the Government; while in India it falls primarily on the Government, who are then compelled to distribute it over the people by continual additions to the taxes, which, as I have already said, in India is considered a political evil of the gravest character.

2640. (*Mr. Chamberlain.*) If the phenomenon with which we have to deal is solely the appreciation of gold, then every payment, every contract to pay gold, becomes increasingly burdensome to the payer, and in equal proportion whether the country is a silver-using or a gold-using country?—Yes, I understood that was Sir Thomas Farrer's question.

2641. (*Mr. Cohen.*) I asked whether the burden is not increased by the appreciation of gold as compared with silver, whether it does not fall with increasing force upon the Indian who has nothing but silver to pay in. That is really the point?—I think on Sir Thomas Farrer's hypothesis it is not so, for I understood him to put the question to me that, if the quantity of the commodities which the country exports, is in both cases increased in proportion with the appreciation of gold, the payer in India is not worse off than the payer in Canada, and I think that is so.

2642. (*Sir T. Farrer.*) The only difference between Canada and India is this, that in Canada the commodities which Canada has to pay as interest are paid for gold directly. In India silver comes in as an intermediary?—Yes.

2643. But both pay in commodities, and with respect to Canada as well as India gold has appreciated, and consequently a larger quantity of commodities are needed, both in the one and the other, to pay the interest on the gold debt?—Yes, I think so. I think that agrees with what I have said before, that in my opinion the measure in which we make the payment is economically of small importance.

2644. Then, to turn to the evidence that you have given us; may we take it that the appendix you have put in gives in Table I. (old and fixed contracts) those of the annual sterling payments on each of which the Indian Government has to bear the whole burden of the fall, without any compensation in the shape of the reduced prices of what it buys?—That is the intention as far as I was able to make the calculation.

2645. And that Table II. (new or current contracts) gives those of the annual sterling payments on which the Indian Government gains in reduction of price what it loses in exchange?—Not exactly that. It includes this, but I have put into Table II. payments which may be said to be at the option of the Government. I will take the line relating to stores for India. The Government of India has it in its power to buy more or less stores, and therefore, although it has made no contract, I include that charge because it may be said that it is open to it to reduce the charge for exchange by buying less stores. Again, I have put into this table the remittance transactions, which are payments that fluctuate with the rate of exchange, and therefore there can be said to be no further loss on that account in consequence of a fall.

2646. But on the whole it is Table I. which gives us the burden of which the Indian Government complain?—Yes.

2647. And I think the largest amount was 26,217,811 of rupees in 1885–86, from which has to be deducted 722,474 gain on current contracts, making 25,495,337 as the whole loss in the last year. Is not that so?—Yes, but the last year is a very exceptional one, as I pointed out in the last paragraph of my memorandum.

2648. It is the fifth line from the bottom of Table I. that gives us the figures of the actual loss which has been incurred by the fall since the time at which the table commences. It is the fifth line at the bottom that gives it for all years?—That is so. That is the total excess caused by the fall in exchange.

2649. (*Mr. Barbour.*) Do you mean the excess of remittance, or the actual loss to the Government of India?—That is the actual loss to the Government of India caused by the fall in exchange, as distinguished from that which is caused by an increase of their gold payments.

2650. (*Sir T. Farrer.*) I was going to ask you if you could put in a table giving year by year, from 1874–75, the net excess of rupees caused by the fall in exchange over what would have been required if the rate of 1874–75 had continued, and also a column converting this excess into sterling at the rate of the year, and also a column showing what the Budget estimate of the charge on this amount had been. That will show us what the fluctuations had been, and it will show us how far the finance minister of India was able to estimate the loss?—Yes, I have prepared the two tables as you desired; but I must point out that, in converting the excess payment of rupees under exchange into sterling, I think the Com-

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mission must take care not to be misled, for the burden on the Government of India is the number of rupees that it has to pay, not what that would have fetched in gold. (*See* Appendix VIII. G. & H.)

2651. That is according to one hypothesis or the other; but giving it in sterling conveys a clearer meaning to the minds of Englishmen?—Possibly; but I think it would be a misleading one, that is my point.

2652. With regard to this loss by exchange, is it not possible to insure against this charge either by a high estimate or by retaining a balance or otherwise? Why is it more difficult to deal with, than any other extraordinary expenditure, such as war or famine?—It is not more difficult to deal with this loss than with a loss by war or famine, if the loss by war or famine were one that it was impossible for the Government of India to foresee or prevent, if the charge were quite beyond its own control, and if it were liable to recur year after year after the financial arrangements had been made; but, in order to provide for such a loss as this, it would be necessary for the Budget every year to show a surplus of two or three millions, and I presume that no Government could go on showing that surplus year after year, and then, if a fall did not occur, refusing to reduce taxation for fear such a fall might occur in another year.

2653. But it would never need to show a surplus of two or three millions, because there has never been a fall in exchange in one year causing loss to that extent?—In the first in the two that I mentioned, in the year 1885–56, there was a deficiency of 740,000 tens of rupees through a fall in exchange, apart altogether from any increase of expenditure. The next year the Government of India provided for a further fall from 1*s.* 7*d.* to 1*s.* 6*d.*, which is approximately 10 or 11 millions of rupees, and immediately afterwards, before August, the rate had fallen to 1*s.* 4$\frac{1}{2}$*d.*, which would have involved, had that fall remained, a further charge of something like 1,750,000 tens of rupees.

2654. I quite understand that there is a great inconvenience about it, but I want to know whether, as compared with the inconvenience of other sudden and unforeseen calls, it is not somewhat exaggerated in the statement of the Government of India?—My point is that it is continually liable to recur, but is quite uncertain.

2655. Can you give the additional expenditure in each year since 1874–5 by the following causes, most of which must have been unforeseen: famine, Afghan War, military preparations on the North-west Frontier, and the Burmah annexation?—I will put in such a paper. (*See* Appendix VIII. K.)

2656. I should like to ask you some questions concerning what you have told us about the revenue and expenditure of India. You have given an account of what we may call the elastic as distinguished from the fixed revenue, and it is with the elastic revenue only that I propose to deal at present. First of all there is excise. That is fixed upon drugs and spirits, is it not?—Yes.

2657. Well there has been in that, I think, looking to the financial statements, a steady growth from 2$\frac{1}{2}$ millions in 1875–76 to 4 millions in 1885–86?—Yes.

2658. And that is not to be attributed to the increase of intemperance, but to improvement in the condition of the people and to better administration?—And to the fact that the rates have been nearly doubled.

2659. In what year?—Great attention has been paid to the administration, and the rates have been continually increased, not by fresh legislation, but by orders given from time to time with the view of bringing up the excise duty to correspond with the import duty. I asked the Revenue Secretary yesterday if he could tell me to what extent taxation had increased, and he said that he thought that, within the last 10 years or so, the rates had been nearly doubled.

2660. The financial statement shows a very gradual and steady increase throughout the decade?—It has been gradual and throughout India, not confined to one district or province.

2661. Then I want to ask you with regard to the license tax and provincial cesses, which I think are called the famine insurance taxes?—Yes, part of the provincial rates, and also the license tax was so called, but not the present assessed taxes. The present assessed taxes are not for famine insurance. The income tax that was put on 12 months ago is not in any way directly connected with that charge.

2662. The license tax has been altered within the last year, has it?—Yes.

2663. It was a tax originally put on for the purpose of famine insurance?—It was so.

2664. It was a tax on persons engaged in professions, commerce, or trade?—Yes.

2665. And it was at the time it was put on proposed to extend it to the professional and official classes?—Yes, which has now been done. It has been made a general income tax for all India.

2666. Is it now applied to famine insurance?—No, not directly; but it is applied to increase the revenues of India generally, and out of this revenue the Government of India puts by a million and a half for famine insurance.

2667. It is a general tax, and not car-marked for any particular purpose?—Yes, it is a general tax.

2668. Sir John Strachey says:—"Of all the taxes "that are levied in India, there will be none more "just or necessary than this, when, as I trust, may "soon happen, similar taxation has been extended "to the official and professional classes." That has been done?—Yes, that has now been done.

2669. The richer classes have been very loud in their complaints at different times, have they not, and have prevailed on the Government to repeal the income tax, while good financiers have always wished to put on a tax of this kind?—I am not prepared to say that the tax has been repealed in consequence of the outcry of the richer classes.

2670. (*Mr. Courtney.*) To which income tax are you referring?—The income tax that expired in 1874, when Lord Northbrook declined to renew it.

2671. The income tax repealed by Sir Charles Trevelyan did not go so low?—Yes, the minimum income taxed then was 500 rupees a year, as it is at present.

2672. (*Mr. Fremantle.*) When was the present income tax put on the richer classes?—About 12 months ago.

2673. (*Sir T. Farrer.*) I should like to read to you a passage from Sir John Strachey's book on the subject:—"The income tax as it existed in 1870-71 "yielded, at the rate of 3$\frac{1}{2}$ per cent. on in- "comes exceeding 500 rupees, a little more than "2,000,000*l.*, and with the better administration which "could be secured, it would certainly, at that rate, now "yield very much more. A large sum could, however, "without difficulty, or the slightest political danger, "be raised, in case of necessity, by the simple plan of "increasing the existing licence tax and cesses. By "doubling their present rate, which would still not "bring them up to the rate at which the income tax "was on more than one occasion levied, and extending "their incidence to the official and professional classes "in the manner that has been proposed, we should ob- "tain at least 2,500,000*l.*, or 1,500,000*l.* more than the "revenue now derived from these sources." Do you agree with that?—No, I cannot agree in that, nor do I think that Sir John Strachey would now maintain that opinion. Certainly, the Government at present hold that to increase the income tax, unless it were inevitable, would be a very grave mistake; and it is almost an essential part of the income tax, as applied to India, that it should, if possible, remain at the same rate and assessment for some time. It is the continual reopening of the assessments, and altering the amount which the natives have to pay, which leads to the great objection on their part to such a tax.

2674. What is obtained from it now?—About 1,399,000*l.*, after deducting the cost of collection.

2675. From the income tax as distinguished from the cesses?—Yes.

2676. And that is now part of the general revenue, and not ear-marked for the purpose of famine insurance?—Yes.

2677. (*Mr. Barbour.*) Do you think that the present provincial rates could be safely or justly doubled for general purposes?—No, certainly not.

2678. (*Sir T. Farrer.*) But the difficulty of raising it would not be that it is ear-marked for a particular purpose, but the difficulty generally of raising taxation of that kind?—The provincial rates include a great deal of money which is of the nature of our local rates, and which can only be applied to local purposes. The provincial rates which are available for the general revenue form a very small portion of the amount received under that head.

2679. But the 1,399,000*l.* was from the income tax?—That was from the income tax, but I should like to qualify that figure. 1,399,000*l.* is the net budget estimate, but it included the receipts from the railway companies, which the Secretary of State decided could not be taxed, except as regards surplus profits, and therefore the amount will be smaller than that.

2680. Then I should like to ask you with regard to stamps on legal and commercial documents. There has been a steady increase in them from 2,800,000*l.* in 1876 to 3,600,000 in 1886?—Yes.

2681. Those, I suppose, are a very fair legitimate tax?—On that point opinions differ very much. There has been a great outcry in the Indian papers and in the Indian Legislative Council on different occasions as to the propriety of the Government making income out of the administration of justice.

2682. (*Mr. Barbour.*) Are you aware that the Chief Justice of the High Court of Calcutta objected to the high taxation levied in the form of court fees and shown in the accounts under the head of stamps?—He did. He wrote a very strong minute.

2683. (*Sir T. Farrer.*) I see in the statistical abstract a steady increase from forests, from 700,000*l.* in 1876 to 1,000,000 in 1885, but I suppose that is gross, not net?—The net increase is from 277,000*l.* in 1875–76 to 411,000*l.* in 1886–87, an increase of only 134,000 in 11 years.

2684. Then in registration I see there is a steady increase in the income from 200,000*l.* in 1876 to 300,000*l.* in 1885. That is a tax, is it not, on all documents affecting the title to property?—On all documents which are registered. It is not imposed for the purpose of taxation. The net receipt was 51,000*l.* in 1875–76 and 119,000*l.* in 1886–87.

2685. (*Mr. Barbour.*) In many cases the registration is compulsory, is it not?—It is compulsory in many cases. Speaking generally, all documents affecting immovable property worth more than 100 rupees (except wills), and certain documents affecting personal property, must be registered. In other cases registration is voluntary.

2686. (*Sir T. Farrer.*) With regard to that Sir John Strachey says it might be raised by 500,000*l.* or more:—These are his words: "This is one of the best "suggestions yet made for adding to the revenue; "there is complete evidence to show that it could be "collected without dissatisfaction, and that no important objection of principle to it exists"?—I cannot say that there would be no objection in principle, and certainly it would be long before it would produce so much as 500,000*l.*, or anything like it, net.

2687. (*Mr. Barbour.*) These documents which are registered, besides the registration fee, pay a pretty heavy stamp duty, do they not?—Yes, I believe so, and that no doubt forms an objection to the increase.

2688. (*Sir T. Farrer.*) Then salt is the next. Upon that the duties were equalised and reduced in 1882, were they not?—Yes.

2689. And something like 1,000,000*l.* was taken off, was it not?—It was more than 1,400,000*l.* which was taken off at that time.

2690. Notwithstanding that, it has continued to increase up to the last year, I think?—It is continually increasing, slowly but gradually.

2691. And I see that with regard to this Sir John Strachey says: "If these anticipations should be "fulfilled, the Government will have in its hands a "financial engine of immense power; for it will be "able, for the purpose of meeting any serious "emergency, to obtain temporarily, by a small increase "of duty, a large increase of revenue, and this almost "without the people being conscious that any addition "has been made to their burdens"?—Yes, the salt revenue on its reduced scale is an engine of very great power for the resources of the Government of India, in a case of emergency; but the duty could not be increased without causing, more than in almost any other case, a feeling of hardship throughout the mass of the people in India, and I have no doubt that any increase of the duty would somewhat check the consumption.

2692. It would touch the very poor?—It would touch the very poor. I find that the revenue in 1885–86 was almost exactly the same as in 1876–77, the consumption having increased from about 26 million to 31 million maunds.

2693. Has there been any steady fall in regard to opium?—There has been a much smaller income for the last year or two, but that is in a considerable degree due to the increase of charge owing to the mode in which the opium revenue is realised. The Indian Government pay for the cultivation and manufacture, and fix beforehand the amount of opium which they will sell by auction. They announce each summer the amount which they will sell in the following calendar year, month by month.

2694. Are their expenses in proportion to the extent of the crop, not of the sale?—Yes.

2695. Consequently, if there is a very large crop and very heavy expenses, that will reduce the net revenue from opium for the year?—Quite so.

2696. So that the revenue falls with a very good crop?—Yes, for the year.

2697. But then there is a stock in hand for subsequent years?—There is a stock in hand.

2698. (*Mr. Barbour.*) These remarks apply to the Bengal opium, not to the Malwa?—Yes, the Bengal opium; but the prices this year are remarkably low, from no reason connected with the Indian crop. There has been a recent treaty made with China, which enables the Chinese Government to receive about three and a half times as much duty at the port as they did before, instead of a large part of the duties being levied by the local authorities piecemeal as the opium was carried up the country; and no doubt the merchants feel that they will have really to pay much more than they did before, and they therefore give a less price in purchasing the opium.

2699. Has that treaty arrangement come into force yet, practically?—It came into force on the 1st of this month, but was not in operation when the last sales were effected of which we have heard. The "additional article" to the Chefoo Convention of 1876, that is, the article under which the new arrangement is provided for, was signed on the 18th of July 1885.

2700. So that if it had not come into force then, and is coming into force hereafter, you may probably expect a further fall in price?—Yes, possibly.

2701. (*Sir T. Farrer.*) Can you give the price per chest of Bengal opium in each year since the present arrangement was made; the arrangement, I mean, under which a fixed quantity is sold each year?—The following table shows the prices of Bengal opium per chest since the practice was begun of announcing beforehand the amount of opium to be sold in each month of the ensuing year:—

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Calendar Years.	Number of Chests sold.	Highest price.	Lowest price.	Average price.
		Rs.	Rs.	Rs.
1880	56,400	1,466	1,212	1,326
1881	56,400	1,443	1,230	1,351
1882	56,400	1,341	1,112	1,240
1883	53,150	1,339	1,168	1,240
1884	47,550	1,457	1,181	1,287
1885	49,992	1,349	1,186	1,255
1886	54,000	1,237	1,050	1,156

2702. (*Mr. Courtney.*) Does the substitution of the one tax for the many taxes make a greater tax on the whole or the same?—I do not think it is possible to tell that exactly, because no one knows what was paid. The Chinese Government agree that, if they take this full tax, they will exempt the chest of opium from further duty as it goes up country.

2703. There was a good deal of discussion as to the amount which should be paid as compensation for the Likin duties?—Yes.

2704. Was it intended that it should be a just equivalent?—It was intended to be a fair equivalent, I believe, for the rights of the Chinese Government.

2705. If it is a fair equivalent, there would be no permanent effect on the price of opium sold?—The amount now payable is probably in excess of the amount supposed to have been paid formerly, but the levy of the full duty at the port would prevent a great deal of the smuggling of the opium up-country without paying the dues.

2706. There are compensations against that?—Yes, no doubt.

2707. But the market is at present agitated by uncertainty as to what the effect will be?—I think possibly that may be one reason for the reduced price.

2708. But the substituted duty was intended to be an exact equivalent?—Yes, for the rights of the Government; but it was expected that they would ensure the receipt of a sum which previously was uncertain.

2709. And therefore it was intended that it should have no permanent effect?—I presume that that was the intention.

2710. (*Sir T. Farrer.*) And subject to any change that may have occurred since the arrangement was made under which the Government sell a fixed quantity in the year, the income from opium has been tolerably steady, has it not?—The net income has fallen in the last six years from 8,451,000*l.* to 6,577,000*l.*

2711. Is that in consequence of the extra expenses incurred by greater crop?—About one-third of the reduction since 1880–81 in the net receipts is due to additional charge; but the expenses included in the Budget of 1886–87 were not so heavy as in either of the two previous years.

2712. (*Mr. Birch.*) But is it not a fact that the production of opium is enormously increasing in China itself?—I believe it is. In 1880 the sales in Calcutta were rather larger than at present; 56,400 against 54,000 chests.

2713. (*Mr. Barbour.*) You do not expect the opium revenue to increase, do you?—No.

2714. You are rather afraid of its falling off?—Yes, I am afraid that that may be the effect of the increased production in China.

2715. (*Mr. Courtney.*) That 8,451,000*l.* with which you started was a considerable increase on previous years?—It had risen rather rapidly in the previous three years.

2716. (*Sir T. Farrer.*) The Customs were largely reduced in 1880–81 by something about 1¼ millions?—Yes; about 1,150,000*l.*

2717. Turning to the expenditure, I see you put the increase of military expenditure in India over that of 1876–77 at about 1½ millions. I observe that in Sir A. Colvin's financial statement it is stated that 2,827,000*l.* is the increase due to the army during the current year, and that 463,200*l.* is the increased political expenditure caused by the complications of 1885–86, and that, but for Burmah and the North-west Frontier, the surplus would have been 400,000*l.* He puts the increase for this year arising from military expenditure at a considerably larger sum than the increase you have given upon the military expenditure of 1876–77?—Sir A. Colvin's statement is open to a little misconstruction in that matter, unless you examine the figures very closely. The figures which you are quoting, from paragraph 20 of his statement, refer to the exceptional increase in 1885–86, not to the permanent increase shown in the current year.

2718. I see in a letter from the Indian Government of February 1886, which was laid before Parliament, that they put the permanent excess of the expenses of the North-west Frontier at over 2,000,000*l.*?—In speaking of the permanent military increase, Sir A. Colvin's figures are an addition to the expenditure in India of 1,127,000*l.* in 1886–87 (paragraph 37 of his statement), and 657,000*l.*, which is deferred to a later date (paragraph 36); so that 1,784,000*l.* represents the permanent increase of military expenditure in India, which is made up to about 2,000,000*l.* if the additional charges for expenditure in England are included.

2719. Will you hand in this table of the revenue and expenditure?—I will do so. It might answer a good many of the questions. (*See* Appendix VIII. L. M.)

2720. The Burmese expenditure will, I suppose, be very much larger than was estimated?—Yes.

2721. If you get into any difficulties with China, it would be as bad a thing as the North-west Frontier?—I think the extra expenditure for Burmah is likely to be 1,100,000*l.* this year.

2722. To return to the debt. What were the principles which governed borrowing in gold or silver?—The principle of the Government of India was to borrow in silver, in the currency of the country, whenever they could; but in a time of great difficulty in India, owing, for instance, to a war or famine, when money had to be raised promptly, it was impossible to raise it in silver. In that case they borrowed in gold, but they always endeavoured to keep down the gold debt as much as possible, so as to retain as a reserve the power of borrowing in sterling.

2723. There are objections, are there not, to borrowing by the Government in India through the Government in London?—Yes, on account of the addition to the gold payments; and also, if the Government were to borrow in London on every occasion, for public works and such purposes which are not absolutely matters of necessity, they would be using up their reserve, and their credit in London would then become worse.

2724. But is not the effect on their credit very much the same when they borrowed silver in India? Did not the money really go from London?—No doubt the money went from London, but the price of the sterling debt is maintained at a much higher rate if the stock is not increased too rapidly.

2725. They both of them fall upon the Indian Government, and both of them must to that extent impair the credit of the Indian Government?—Yes, but, as was pointed out the other day, the stock available for trustee investments stands much higher than the rupee debt, though in either case it is the credit of the Government of India.

2726. But the credit of the Government of India would not be more diminished by borrowing in London than by borrowing in Calcutta?—Not the credit of the Government of India, perhaps, but the value of the sterling securities would.

2727. Can you give any figures or memorandum showing how the credit of the Indian Government in England and in India has progressed during the last 10 years or upwards?—I hand in a table for the purpose (*see* Appendix VIII. N.)

2728. (*Mr. Barbour.*) You said just now that, when the Government borrowed in India, the money went

from this country; did the whole of the money go?—No, only a portion.

2729. (*Mr. Courtney.*) About what proportion?—It has never been possible to say exactly, because it is subscribed through the banks, and the ratio cannot be accurately told; but the Government of India about three years ago, in 1884, when evidence was given before the Select Committee on Indian Railways, held that perhaps 1 million tens of rupees might be annually subscribed in India from local capital. But, if the Government raised a public works loan of 2½ or 3½ million tens of rupees, the extra 1½ or 2½ millions would come from England.

2730. (*Mr. Birch.*) Two thirds from England?—It depends on the amount of the loan. What they held was that only about 1 million could be raised from local subscriptions.

2731. (*Mr. Courtney.*) Has the rate of interest in the London market been habitually below that in Calcutta?—Yes, assuming the same relation between the gold and the silver.

2732. No doubt; but, whatever that relation may be at the moment, you can borrow more cheaply in London than you can in Calcutta?—Yes.

2733. Just as the Government of New South Wales can borrow more cheaply in London than in Sydney?—Yes.

2734. The Government of New South Wales habitually borrows in London?—Yes.

2735. So that a portion of the debt may go back to Sydney; but it makes the bulk of its debt in London? Yes.

2736. And thinks that economical, because it can borrow more cheaply?—Yes.

2737. And, if there is the fact that trustees can invest in the debt created here, that is an additional inducement to borrow here?—Yes.

2738. Now, why has there not always been the same inducement, leaving out of question the relation between silver and gold, to the Government of India to borrow in London?—I think the objection has always been the uncertainty what the rate of interest that it would have to pay in future years would be. There is no doubt that the rate of interest it pays at the moment, if it then terminated its arrangement, would be cheaper in London than in Calcutta; but, if it borrows at 4 per cent. in Calcutta and at 3½ per cent, in London, it may happen that the number of rupees which it will have to send home in a few years afterwards will be 4½ per cent. on the amount that was received.

2739. I said, putting out of question the fluctuation between the gold and silver, leaving that out of account?—Then, I think, a further reason is the importance of encouraging local capitalists as much as possible. The natives of India will not subscribe to a loan raised in London, as a rule.

2740. But is it economically desirable for the Government of India to borrow more dearly in Calcutta, because it thereby enlists native capitalists?—I think that there is a political advantage of great moment in the natives of the country being holders of their own debt, and not feeling that it is a foreign debt on which they must pay their interest.

2741. But a considerable portion is actually subscribed in London, comes from London, even when it is nominally raised in Calcutta?—Yes, a considerable proportion comes out from London.

2742. And the differences between the ruling rates in London and Calcutta were such that that must always be the case?—I should think so.

2743. (*Mr. Cohen.*) Is it not the fact that no loans can be raised in London for India without consent of Parliament, although we can raise loans for Crown colonies and other self-governing colonies?—We cannot raise loans in London without the consent of Parliament.

2744. But you can raise money in India without coming to Parliament?—Yes. Parliament has never limited the powers of the Government of India to raise debt in India.

2745. (*Sir T. Farrer.*) The reduction of the debt of which you spoke has arisen from carrying over what was formerly the general debt to the account of productive works. You say debt has not been paid off?—For purposes of account, the debt has been divided into two portions; one is the debt raised for public works, and the other is the debt raised for other purposes. It seldom, probably never, can happen that the amount of debt raised in any one year for public works will exactly agree with the amount spent for public works, and the practice is to transfer every year from the ordinary debt to the public works debt the sum corresponding to the capital expenditure on public works during the year.

2746. And in that way the ordinary debt has been largely reduced, and the debt for public works is increased?—Yes; if the Government lays out 3 millions in public works, and provides 2½ millions of that sum from loan (which is added to the ordinary debt), and the other 500,000*l.* from revenue, say, from the famine insurance grant, and then transfers 3 millions from the ordinary to the public works portion of the debt, there is really a reduction of the ordinary debt by half a million. Hence, the reduction of ordinary debt is due to the fact that a good deal of money has been spent from revenue on the construction of public works, and a corresponding sum transferred from the ordinary to the public works portion of the debt.

2747. That is, you expend revenue on capital account?—Yes.

2748. And you treat that as reduction of debt?—Quite so.

2749. (*Mr. Barbour.*) These public works do not always return the full rate of interest on the capital expended?—No. Up to 1884 the Government made a point of not borrowing money for public works, that is to say, not allowing public works to be constructed out of borrowed money, unless there was a reasonable probability that the return would exceed the rate of interest, but they have always in recent years allowed revenue to be spent, when the Government could afford it, on works which were calculated to be of utility, and especially to provide an assurance against famine, whether they would pay fully the interest charge or not.

2750. (*Sir T. Farrer.*) But on the whole they are beginning to pay very well, are they not?—They have very much improved in late years. The railways in particular have largely improved.

2751. And are improving still, subject to the unproductive railways?—Yes, quite so; but the extra charge for unproductive railways has so much increased in the last year or two, owing to the military railways, that the net charge in the Budget for 1886–87 exceeds 1,700,000 tens of rupees.

2752. Is this statement of Sir John Strachey correct, or is it modified by what has since happened. He says (page 102):—"India has now obtained works "to the value of 142,000,000*l.*, which produce a gross "income of 15,500,000*l.*, and (excluding interest "charges on capital) a net income of 7,000,000*l.*, and "consequently yield a return of 4¾ per cent. on the "capital outlay, which pays all interest except a pre-"sent net residual yearly charge on the State of "195,000*l.*, or less than 3 per cent.," besides being a benefit to the country, which Sir John Strachey puts roughly at 40,000,000*l.* a year?—I think that probably in that calculation Sir John Strachey was speaking solely of those which had been constructed as productive works, and that he omitted the unproductive works which are now debited to the railway account. You will see, by referring to the top of page 100, that this is the case.

2753. He says (page 45) that "the general result "is that the average rate of gross interest charge on "the whole Indian debt has fallen from 4·6 in 1869–70 "to 3·8 in 1880–81, or about ¾ per cent.," and "fur-"ther reductions may be anticipated"?—In that calculation no account was taken of the fall in exchange. He treated the sterling expenditure as only

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so many tens of rupees, as was the practice at that time, the Exchange charge being entered separately.

2754. I do not think he does, because I think he speaks of those yearly contracts as improvident contracts in which an agreement was made to pay the debtors in England in gold?—Yes, but that is in another part of the book. The figures which are now shown as the net charge on the railway revenue account are in 1878–79, in tens of rupees, 2,076,000; in 1879–80, 1,571,000; in 1880–81, 1,044,000; in 1881–82, 286,000; in 1882–83, 1,306,000; 1883–84, 305,000; 1884–85, 1,051,000; 1885–86, 782,000; and in the Budget for 1886–87, 1,722,000.

2755. I would ask you what are the famine and insurance expenses. I cannot understand exactly what those are. 1,500,000*l.* were set aside to pay famine and insurance expenses; then how is that 1,500,000*l.* applied?—In the first place it is applied to the relief of famine during the year.

2756. But that accounts for a very small part of it; now how is the rest o it spent?—The next object to which it was devoted under the arrangement that was made in 1881–82, when it began to be entered in the account in this way, was that half of it, 750,000*l.*, might be spent on the construction of works calculated to protect the country against famine.

2757. That is to say, upon useful productive works?—No, it was not allowed to be spent on a work merely because it would be useful, and would pay 4 per cent. It was only to be spent on works that went through districts where famine was likely to occur, and where the effect of the railway would be either to throw grain in time of famine into the country, or, in the case of a canal, to irrigate the country and so protect it against famine.

2758. Still, on the whole, these would be railways for the general benefit of the country?—For the general benefit of the country, but not necessarily of a directly remunerative character.

2759. Still they are useful productive works?—I suppose every railway in India must be useful in some way.

2760. Then it would seem, would it not, that the taxes originally imposed for the purposes of famine insurance are now become general taxes, and that the purposes to which they are applied are really useful general purposes?—The Government of India, in principle, still would hold itself bound to spend 1,500,000*l.*, either in the manner that I have been describing, in actual famine relief, or in the construction of works, or in the reduction of debt; but in carrying into effect the policy of continually raising debt for the construction of railways, it would have been absurd to have with one hand paid off debt and with the other borrowed, and therefore the balance is taken as part of the loan for the year.

2761. (*Mr. Barbour.*) I think that special provision of 1,500,000*l.* will disappear in the coming year?—It will practically be entirely taken to meet the charge for railways being constructed.

2762. Because the Government of India in its present position cannot afford, as it were, to pay that insurance premium any longer?—Yes.

2763. (*Sir T. Farrer.*) In fact the tax has become a general tax, and the proceeds are treated as general revenue?—No, I am not prepared to admit that that is the case. The Government of India have agreed with the Secretary of State that they will do so this year as an exceptional arrangement, rather than impose fresh taxation, till they see what their financial position is, but they do not hold themselves entitled to take it as general revenue in the same manner that they take any other part of their annual income.

2764. I should like to read to you a sentence from a letter from the Government of India, dated the 26th January 1886. It is one of the letters in which they press some alteration of the currency, or at any rate some large measure, upon the Treasury for the purpose of meeting the difficulties arising, in their opinion, from the loss by exchange: "The position "of India in relation to taxation and the sources "of the public revenues is very peculiar, not merely "from the habits of the people, and their strong "aversion to change, which is more specially ex- "hibited to new forms of taxation, but likewise "from the character of the Government, which is in "the hands of foreigners, who hold all the principal "administrative offices, and form so large a part of "the army. The impatience of new taxation which "would have to be borne wholly as a consequence of "the foreign rule imposed on the country, and virtually "to meet additions to charges arising outside of the "country, would constitute a political danger, the "real magnitude of which it is to be feared is not at "all appreciated by persons who have no knowledge "of, or concern in, the Government of India, but "which those responsible for that Government have "long regarded as of the most serious order." You are no doubt aware of that statement? And now I will ask you to compare with it the following statement from Sir John Strachey's book. Sir John Strachey says (page 356): "But although new forms of "taxation may be difficult to devise, it would be a "great error to suppose that the limits of possible "taxation have been nearly reached in India. The "country is, beyond a doubt, one of the most lightly "taxed in the world, and there is not only no founda- "tion for the assertion that taxation has of late years "been increasing, but, on the contrary, it has posi- "tively been reduced." Then he says, at page 374: "The general conclusions which seem to be established "are these: first, that the existing revenue is so "prosperous, and its main sources so certainly in- "creasing in productiveness, that there is no reason "to suppose that recourse to new and untried methods "of taxation will become necessary; secondly, that "there would be little difficulty, in case of necessity, "in almost immediately increasing the revenue "yielded by existing and other taxes of a little "objectionable nature, to the extent of at least "2,000,000*l.* a year; and thirdly, that if a much "larger sum than any which could be provided by "such means, or by the growth of existing revenues, "should be required in consequence of some great "financial catastrophe, the income of the State "could certainly be increased by several millions a "year without injury to the country; but that before "any measures were taken in such a view the whole "question of taxation in Bengal should be re-con- "sidered, with the object of placing on that province "that fair share of the public burdens which it now "fails to bear." I would ask you whether you agree with these statements?—I think I may say at once that the position has completely changed since that book was written. At that time there was, excluding charges for war and frontier railways, which Sir John Strachey put aside as not recurring, an estimated surplus exceeding 5 millions. The position last year was that there was a deficit of 2,891,000*l.*, and that the Government has been able only to provide a surplus this year of 182,000*l.*, which was immediately swept away by the fall in exchange. The circumstances of the country seem to me to have entirely changed, both as regards the expected increase of revenue, and as regards the actual increase of expenditure, even if the charges connected with the Afghan War be set aside as exceptional.

2765. Do you mean that circumstances have occurred which have thrown additional and unexpected expenses upon the Government, or that the productive powers of the country, the foundation of all this taxation, have become less?—The net receipt from one important source of revenue, the opium, has greatly diminished. The revenue under the steadily productive heads of stamps and excise appears to have nearly attained its maximum, and the expenditure under the head of exchange has been enormously increased since Sir John Strachey's book was written. I will prepare a memorandum on the subject. (*See* Appendix VIII. O.)

2766. He speaks very strongly about the exchange. There is in his book a chapter upon it?—Yes, there

is; but I do not think he contemplated the exchange falling to 1*s.* 4½*d.* in four or five years from that time.

2767. If I understand the general purport of your evidence about the revenue and expenditure, it is this, that in the 10 years which you take there has been an increase of expenditure of 3,000,000*l.* and of revenue of 6,000,000*l.* That is to say, there has been an increased surplus of 3,000,000*l.*?—An increase of 6,000,000*l.* in net revenue, and an increase of 3¼ millions in net expenditure.

2768. And during those 10 years there has been, first and last, a very heavy loss by exchange, though not so heavy at first as it is at present?—Yes.

2769. There is, if you include 1874, which comes immediately before the time you have referred to, an extra expenditure of 15,000,000*l.* on famine, I think?—In the ten years from 1877–8 to 1886–7 the payments for famine relief and insurance were just about 15,000,000*l.*; if you go back to 1874–5 you must add 5,000,000*l.* more.

2770. There has also during that time been an expenditure of about 18,000,000*l.* on the Afghan war?—About 17,500,000*l.* net, of which, however, the British Government paid 6,000,000*l.*

2771. India has been provided with railway and other productive works, at a cost of 142,000,000*l.*?—That is the amount spent from the time when railways and canals were first constructed by the Government in India to the date of the publication of Sir John Strachey's book. The capital outlay may now be taken at above 190,000,000*l.*

2772. And during the last 10 years there has been a reduction of taxation by 2½ millions, balanced by an imposition of taxation to the extent of about 2,000,000*l.*?—Yes, approximately.

2773. And India has got, in addition, a great number of railways which pay their expenses and add enormously to the wealth and productive power of the country?—They can hardly be said to pay their expenses directly, as they are estimated to be now costing about 1¾ millions a year, but they unquestionably have enormously increased the productive power of the country.

2774. Do not you think that is a very good record for any country, and one that reflects great credit on its financial administration?—Yes, I do.

2775. I think you did not make a point of the discouragement of private investments in Indian commercial undertakings? Can you give any notion of the amount of capital invested in such undertakings as cotton mills, jute mills, &c. in India during the last 10 years or upwards? And whether it is English or Indian capital?—I am afraid that I cannot give at all a complete answer to that question. From the statistical tables prepared in India I have extracted statements, which I hand in, giving the number of mills, looms, spindles, and hands employed in the cotton and jute manufacturing industries, as far as they are known, from 1876–7 to 1884–5; and also a statement of the Joint Stock Companies registered and working in British India in March 1885. The paid-up capital of 696 such companies was about 20,636,000 tens of rupees, but I am unable to say how far this was English or Indian capital. (See Appendix VIII P. & Q.)

2776. (*Mr. Fremantle.*) Have you formed any opinion as to the expediency of introducing a gold standard into India?—Yes, I think it would not be at all desirable.

2777. Was not gold the standard of value in India till 1835?—Yes, it was not till 1835 that gold ceased to be legal tender in India. Silver has always been standard there, but gold was also legal tender till 1835.

2778. (*Mr. Fremantle.*) What led to the abolition of the gold standard?—I believe that it was mainly the very great inconvenience of the numerous coins which were passing current in various districts in India, and the great importance of having one uniform coin. It was, therefore, decided to have one standard rupee, called the Company's rupee, and that was the coin to be current throughout the whole of British India.

2779. So that it was more an objection to the existing state of things than an absolute preference for the single silver standard?—The Court of Directors considered that Lord Liverpool's recently published letter had established the principle that the standard coin should be of one metal only, and they had no doubt that in India that metal must be silver. It seems, however, to have been the very great inconvenience of the numerous coins, and the want of a standard coin, that was the primary cause of the change.

2780. How would you state your objections to the gold standard, provided the coinage arrangements were good?—The whole of the settlements of the land revenue are in silver, and the contract is that the landholder shall pay a certain number of silver rupees of a fixed standard. The meaning of introducing a gold standard would be that he would have to pay a certain number of fractions of a sovereign, and that would imply a fluctuating quantity of rupees, which would lead to very great inconvenience, besides possibly being very unjust to the payer, if gold should continue to rise in value.

2781. But might not the existing rupees be treated as a token coinage, and be received in payment up to a certain fixed amount?—In that case the rupee would cease to represent a fixed quantity of silver; the whole of the hoarded capital of India would be depreciated, if the rupees were made a token currency instead of a standard currency.

2782. Would not the adoption of a gold standard on the other hand bring out the hoards of gold very largely, and would not that be a good thing for the country?—I doubt if it would have any effect of that kind. Treasure will always be hoarded, unless the people completely change their habits, and, by preference, gold as being the more valuable metal. I think that the people will even now bring gold to the market whenever they suppose that it pays them to do so; and I do not think the fact of its being a standard coin would bring out gold any more, whereas the immense mass of small payments which have to be paid render gold coins of very little practical use in the country.

2783. But at present gold is in practical use in India for hoarding and for ornament?—There is a very little coinage, but it is a mere nothing.

2784. You appear to be apprehensive that the sterling prices of produce and of silver may be expected to fall until a point is reached at which silver cannot be brought to market with advantage, when the grower of produce must consent to a reduction of price, or trade will be checked. Have you formed any opinion as to when that point would be reached?—No, I cannot pretend to do that.

2785. But I presume you would agree that the effect of a considerable further fall in the sterling price of silver would lead to the closing of poorer mines, so that the fall would be to a certain extent arrested?—At a certain point, but the statistics of the production show that it may go to a very low point before it would be very greatly affected, I think.

2786. (*Sir John Lubbock.*) You stated that in your opinion the fall in exchange has been a great injury, both to the Government of India and to the people of India?—Yes, to the whole Indian community. I take the Government and the people as one for that purpose. It is with reference to the foreign payments.

2787. And when you speak of loss by exchange you mean a loss owing to change in the relative value of gold and silver. You have stated that the net expenditure of India in England has risen since 1876–77 by 3,593,000*l.*, of which you attribute 1,081,000*l.* to increase of expenditure, and 2,512,000*l.* to so-called exchange?—The increase of sterling expenditure is 1,081,000*l.*, and the number of tens of rupees payable in respect of sterling expenditure is increased by 3,593,000, so that the increase under exchange is 2,512,000.

2788. And you stated that until recently silver

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prices in India had not materially altered?—As far as I can see, that is so.

2789. Your argument, then, as far as I understand you, is that this 2,512,000*l.*, due to so-called exchange, is a real loss to India?—A real payment by India additional to the payments she had to make before.

2790. How far do you consider that this loss is due to the fact of the currency in India being in silver?—I consider that the whole of the increase arises from the taxes being received in silver, while a large part of the payments must be made in gold. The Government have only received a certain amount of silver, and they have had to pay a larger amount of silver than before. Whereas they would before have paid a certain number of rupees to defray their sterling expenditure, they now, without any consequent increase of their revenue, have to make a larger payment, therefore the charge is really increased by the mere fact that the number of rupees required to defray that charge has increased.

2791. You mean, that although they received the same number of rupees they really received a smaller value?—A smaller gold value. They receive the rupees which represent in India, so far as I can see, about the same value.

2792. Therefore your contention is that the silver has remained at the same value, but the gold has appreciated?—That, I think, is the case.

2793. And supposing the currency had been in gold, and the taxes collected in gold, would not the taxes have been really higher, for though the revenue remained nominally the same as before, still the actual value would have been greater?—The revenue, so far as the Government was concerned, would have remained the same, but as far as the community was concerned the effect would have been different; if the taxes had been payable in gold the payment would have borne more heavily on the taxpayers.

2794. The total expenditure of India is 44,000,000 tens of rupees, of which 14,000,000 are gold payments?—Yes, approximately.

2795. Therefore they are paying an increased amount as regards 14,000,000, speaking roughly?—Yes.

2796. The total debt of India is 162,000,000, speaking in round figures, of which 68,000,000 is in England and is due in gold, and 94,000,000 is in silver?—The sterling debt of India on the 31st March 1885 was 69,000,000, and the rupee debt 93,000,000. That would give a total of 162,000,000.

2797. And, of course, if the whole of the Indian debt had been in gold, the loss would have been far heavier than it is at present?—Certainly.

2798. You regard it as an advantage, do you not, that the standard of value should be stable in any country. That is your contention?—Yes, as far as it is practicable.

2799. And I suppose you will admit that, if India had a gold currency, prices in India would have fallen as prices in England have fallen?—I think so.

2800. You have stated that prices actually have not fallen?—I cannot see that they have, till lately.

2801. You have said that the Indian Government could not be expected to have put forward a budget year after year, showing a surplus of 2,000,000*l.*, if that 2,000,000*l.* were not actually required for famine, but in that case the 2,000,000*l.* would have gone in the reduction of debt, would it not?—They would have used any realized surplus in that way, but they would have been exposed to continual demands for reduction of taxes from one side or another.

2802. You would not consider a reduction of 2,000,000*l.* of debt to be an unreasonable amount under the conditions of India, would you?—What would actually have happened, in that case, would have been that they would have spent 3 millions or 3½ millions on public works, and only borrowed 1 or 1½ millions, so that the other 2,000,000*l.* would practically have paid off debt. I should have been very glad to have seen such a policy, but it is more probable that taxes would have been remitted, or expenditure in other ways would have been increased.

2803. (*Mr. Barbour.*) A witness stated to the Commission that in the 10 years ending 1885 the Government of India had borrowed 59,000,000*l.*, and had spent on railways, irrigation, harbours, roads, and other public works, 116,000,000*l.* He quoted from the statistical abstract, and he said that a country that spent roughly 6,000,000 tens of rupees every year in this way over and above what it borrowed could not be said to be in an unsatisfactory position. Have you any remarks to make with reference to these positions?—I have examined the statistical abstract and the accounts, but I am unable to find such figures. In the 10 years from 1875-76 to 1884-85, the expenditure out of revenue on the construction of railways and irrigation works, including those charged to the famine insurance grant, was 8,768,000 tens of rupees, or an annual average of 877,000, not 6,000,000. Possibly the witness included the expenditure on the construction and repair of barracks, civil buildings of all kinds, and ordinary roads. This amounted to an average of 4,729,000 a year, over an area of 868,000 square miles, and had to be met as one of the necessities of government in India; but, while it doubtless is satisfactory that the Government should thus be able to discharge its duty, and while it may be a cause of regret that such expenditure frequently has to be temporarily curtailed when there is a special emergency, it cannot be viewed as a luxury which can only be indulged in if the Government is in a flourishing condition.

2804. It was one of the ordinary charges of administration?—Yes.

2805. A witness pointed to the fact that between 1872-73 and 1881-82 the salt revenue had increased by 1,208,000, and said that that showed remarkable elasticity in the revenues of India. During that time were there any changes of system, or is the whole of this sum due to natural growth of revenue?—The salt revenue did increase from 6,167,000 in 1872-3 to 7,376,000 in 1881-2, that is by, 1,209,000. Of this amount an increase of 805,000 occurred in the two years from 1877-78 to 1879-80, when measures were taken for the equalisation of the duties by reducing those in Northern India by about 16 or 17 per cent. and raising them in Southern India by 38 per cent. In 1882 a general reduction of 20 per cent. or more was effected. But the administration of the department had also been greatly improved, so that probably there was much less illicit consumption than formerly, and the quantity paying duty rose from 23 to 27 million maunds between 1872-73 and 1881-82. This included 938,000 maunds consumed by the native states with whom arrangements were made about 1876, the receipts from which and from the Portuguese Government under treaty amounted to 363,000.

2806. So that there has not been a very great growth of revenue?—It leaves very little for general growth.

2807. You gave figures just now showing that in 1870 the proportion of the whole English trade which was trade with India was 8·3 per cent. and in 1884 it was 9·7?—Yes.

2808. During those years, I think, the export duty on wheat was remitted in India?—That was in 1873.

2809. And during those years the import duties were entirely remitted?—The general import duties were remitted in 1882.

2810. And that would naturally cause a considerable growth of trade?—Undoubtedly.

2811. And the opening of the Suez Canal would no doubt have a tendency to specially increase the trade of England with countries lying east of the Suez Canal?—Yes.

2812. The trade of Europe at any rate?—The trade of Europe.

Witness afterwards withdrew.

Adjourned till Friday.

Twelfth Day.

Friday, 18th February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.

SIR T. H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, BART., M.P.

MR. GEO. H. MURRAY, *Secretary*.

Mr. PAUL F. TIDMAN was called and examined.

Mr. P. F. Tidman

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2813. (*The Chairman.*) You are a member, are you not, of the firm of Mactaggart & Co., East India merchants?—Yes.

2814. And are well acquainted with all the facts concerning our trade with the East?—With the far Eastern portion of it.

2815. Are you of opinion that that trade has suffered by the disturbance which has occurred during the last 10 years in the relative values of gold and silver?—So far as English traders are concerned.

2816. Could you explain in some detail to the Commission exactly how the injury to the English traders arises?—I will take the two branches of trade, the one carried on by English merchants to the East in manufactured goods, and the other in the importation of produce from the East.

2817-8. Let us take first the case of the English merchant exporting to the East; do you think he suffers from the alteration in the exchange?—My case is, that he is in an entire state of uncertainty as to what he will receive for the proceeds of the goods that he ships at the present moment. He may make a calculation based upon the data before him at the time, and he may then find that, not as the result of any trade loss or contingency whatever, but from some fluctuation in the market for silver, what in the best of judgment would have been a profit has been turned into a loss.

2819. Some of the witnesses that we have examined have told us that that particular source of loss is obviated by arrangement with the banks, and by telegraphic transfers by which the merchant exporting to the East and from the East is saved from all loss?—Yes. I think, however, it must be evident to the Commission that there is a risk incurred if the article which a man must take in exchange for his goods, falls in value between the time of the commencement of his operation and the close. That risk must be borne by somebody, and if I put it on to a bank I simply shift the risk, and the person who takes that risk makes me pay for it. But, as a matter of fact, you will find that, whereas it has been asserted that Eastern banks are always willing to take this risk there are times out of number when they decline to do so, and when the purchase of goods is simply stopped because the merchant cannot make his arrangement for the exchange.

2820. I suppose those are occasions when the fluctuations are of so violent a character that the bank will not take the risk?—It would be generally on occasions of that sort. There might be other reasons, but that would be one reason.

2821. But, even at ordinary times, you are of opinion that the bank practically charges an insurance rate in addition to their ordinary business rate, and that that insurance rate is *pro tanto* a weight upon commerce?—I distinctly think so. There may be cases when the bank can reduce that risk to a minimum.

2822. But still they have to charge something for it?—The risk is always there.

2823. (*Mr. Houldsworth.*) The risk is on the balance that the banks have, because, although the banks lose in one direction, they gain in another, and therefore the total amount of risk is the balance. It might be a balance of profit. I quite follow you that there is a charge for the risk, but, after all, it is only on the balance of the bills both ways?—From the banker's point of view they might hedge both ways by a double operation.

2824. (*The Chairman.*) But there are certain cases which the banks cannot cover, in your opinion?—Distinctly; and they decline to sell forward in exchange. I have referred to the Manchester accounts of last year, and I found that that was so. On a number of occasions the market in Manchester for the East came to a deadlock, upon the ground, stated publicly, that the uncertainty of the exchange prevented merchants executing orders. That is in 32 weeks out of 50 last year.

2825. And on those days the whole commerce between the two countries was checked, owing solely to the uncertainty of the exchange?—Most distinctly; that is borne out by the public records of Manchester. You will find it in the prices current of any of the leading firms in Manchester. Orders in the market which might have been executed were impracticable, owing to the impossibility of fixing exchange.

2826. We are not to understand you as holding that for 32 weeks out of 50 Manchester and Singapore and the East had no commercial relations with each other whatever?—Not at all.

2827. What we are to understand you as meaning is, that there was a distinct inconvenience and check to the exporting merchant, because he could not induce the banks to take the risk of a fall by exchange, owing to the uncertain relations existing between gold and silver?—That is the explanation of it; that if there were orders in the market that day for 500,000*l.*, those orders were not and could not be executed, owing to the uncertain position of the exchange.

2828. They had to stand over to a period when the exchange became more stable?—Distinctly.

2829. (*Mr. Courtney.*) If there are orders?—There are always orders every week, and large orders. The trade is regular. It might be more one week

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than another, but the orders were there and are there. You would hardly find a week in Manchester in the year in which there were no orders, and orders to a large amount.

2830. (*Mr. Houldsworth.*) Might I ask whether the same effect was produced on imports, whether there was a check there also or whether they were not stimulated by the same cause?—The causes would not be coincident at all.

2831. (*The Chairman.*) As I understand, the particular evil which you are now explaining to the Commission is an evil which arises, not from the fall of silver, but from the uncertainty of the relations between silver and gold?—That is so entirely.

2832. And therefore that would affect imports and exports equally?—Yes, but the imported produce being sold in London upon the day on which the order was impracticable in Manchester would have been subject to entirely different conditions. It would have been drawn for months previously, and its cost would have been fixed months previously.

2833. (*Sir T. Farrer.*) I should like to ask whether this uncertainty arises from an actual fall or rise in the exchange at the time, or from some speculative uncertainty about what it may be. Is it at the time when there is a great fall in exchange that this uncertainty and difficulty arises?—If you trace the feeling with regard to silver for the first six months of last year, you find that the uncertainty about its value became intensified as the year went on, so much so that in the last quarter of the year there was a kind of feeling approaching to what we had some years ago, a feeling of panic such as we had when the suspension of the Bland Bill was spoken about, and if you notice the chart which is before the Commission the fall in price was very severe during those three months. Naturally at that time there was a very great uncertainty as to the future, and a complete distrust in the future of silver. Now I say that in the month of July the whole feeling turned, whether it was the appointment of this Commission, which I believe has had a great deal to do with it, or the large business done in wheat in India which created a great demand for exchanges or both, I do not know, but the reverse effect was produced, confidence was re-established to a great extent, and the price of silver rose.

2834. Then during that first six months, and especially towards the end of it, the business was very much extended, and exports would very naturally fall too, would they not?—They did so.

2835. And they would increase towards the end of the year?—Yes.

2836. Then now I will ask you to look at that paper which shows the export of cotton piece goods month by month through the year, and I ask you whether you find in those figures any evidence of that?—I know that towards the end of the year the Manchester figures increased; but to show this fairly you would require to see the next three months, when goods are ordered. They might take four months to make before they are exported.

2837. It is not at the time this suspension of business takes place, but two or three months afterwards that you see the effect?—Clearly.

2838. Now I would ask you to look at this return again for the three months after the months in which you say there was that great depression; do you see any such effect?—You must look at the whole exports. You have given me the exports of India only, and I think I am quite right in saying that the exports of cotton goods from Lancashire towards the close of last year showed a decided advance, and made up for a very dull state of business during the early part of the year.

2839. Do these returns show it?—Not as you put them here.

2840. They are very much the same all through the year. I think the largest amount of export was in value 1,700,000*l.* in March; the next largest in August, about 1,700,000*l.* again; and the smallest in December, when there was about 1,300,000*l.*?—This is only to India, which is one great market, but not the world's market for Lancashire.

2841. (*The Chairman.*) But, at all events, as I understand your view, the uncertainty of the exchange does disturb the Manchester market on certain days when that uncertainty prevails?—Yes; but I do not wish that that should be taken merely as my opinion. I appeal to the printed records of the Manchester market.

2842. You have not traced the results of that disturbance in detail through the Manchester records and compared it with the monthly return of exports and imports?—I have not.

2843. What you tell us is the injurious effect of the disturbance on the Manchester Exchange?—Yes.

2844. And you hold that such a disturbance cannot exist without causing considerable inconvenience to commerce?—I do.

2845. (*Mr. Cohen.*) How long would that disturbance last which, you say, involved a cessation of business; a panic might only last six hours?—Friday is the principal Manchester market day. If the market we are speaking of is that of the 23rd April, you find the price of silver 47$\frac{1}{4}$*d.* In a fortnight after that day it has fallen $\frac{1}{2}$*d.* Well that, of course, would render impracticable the limits that had been practicable two market days previously. Now, between the 7th of May and the next market day, the 14th, there was a further fall of exchange of nearly 1*d.*, therefore those limits would not only be impracticable on that day, but utterly out of the question, and hopeless; therefore business would be so far stopped unless those limits had been raised. The same limits remaining would be more impracticable a fortnight after than they were before.

2846. I want to get the particular fact that you have just stated substantiated. I do not think that you intend to convey by your answers that all business was stopped; it is simply that within certain limits transactions were impracticable?—I hope I have not made any such representation as that.

2847. What I want to know is whether the business was stopped in Manchester altogether for any period of time, or whether such stoppage did not only occur twice in the year, each time for 24 hours in consequence of the extreme variations and the fluctuation of silver?—I should say that business was never stopped, because there was purchasing for gold-using markets as well as for silver. There is always business. There is purchasing for the Australian markets as well as the Indian markets, for Australia is not affected by the variations and fluctuation of silver. I am not expressing my own opinion, but stating a matter upon which the Commission may satisfy themselves by the printed statements in Manchester. On those 32 occasions, the report states, business was either checked or stopped by the exchange difficulty. It is not my opinion, it is the opinion of the business community of Manchester.

2848. (*Mr. Barbour.*) Do I understand you to say that these orders were afterwards executed, that there was merely an interruption for the time, but no diminution in the total amount of orders?—Some might have been executed and some withdrawn, in consequence of the limits of the day. If I give an order it is to be executed within a certain time: if it cannot be executed within that time, and the limits are impracticable, the order falls altogether.

2849. (*Sir T. Farrer.*) Could you give us the dates of those 32 occasions?—They can all be put in before you; I have not them in my head.

2850-1. (*Mr. Birch.*) Supposing the market were held on the Tuesday, and nothing could be done in consequence of the fluctuations of exchange, the operations might be done on the Wednesday out of the market, just as well as in the market on the market day. It is only a momentary check on account of telegraphic information received that the exchange has suddenly dropped 1*d.*, and everybody is frightened for the moment, but the following day the merchant goes into the market and executes the orders he had

ready the previous day. The prices current would only show you what happened on the market day?—If a person in Manchester has an order to buy upon the Tuesday at a limit, and that limit is impracticable on account of the exchange between silver and gold on that day, it does not become practicable on Wednesday unless there is a change in the exchange, and if, as I point out to you, and as this chart shows, the course of silver at that time was steadily downward, what was impracticable on Wednesday became more impracticable on the following Friday, and it is only when you get a sudden jump, as you do here from the 14th of May to the 21st, that these orders, if they were left in hand for three weeks, may become practicable, and probably did become practicable.

2852. (*Mr. Barbour.*) Do you speak from personal experience in the course of the trade?—I am not personally interested in Manchester at all. I give my orders to buy through an agent in Manchester.

2853. (*The Chairman.*) Now perhaps you will go through the particular example which you mentioned as representing a possible transaction?—In the case I am supposing the buyer buys for shipment to Singapore 100 bales of grey yarn, and it costs him 1,500*l.* It reaches Singapore in the usual time, and is sold at the market price of the day, at the exchange of the day, which leaves him a loss. Now that is a trade loss, which has been incurred by that operation at the time I am stating.

2854. That trade loss arises from the fact that the relative value of gold and silver has altered between the 10th April and the 11th June?—No, there was scarcely any fall in silver between those dates; this is a loss arising out of the conditions of the market on the other side; it may have arisen from a variety of causes.

2855. But would a merchant, knowing that he would undergo such a loss, engage in the transaction at all?—In many cases, yes, because a merchant is obliged to keep up a large and assorted stock. He is very much in the position of a shopkeeper. If he has a large establishment, and desires to keep his place in the market, he must keep it supplied with every class of goods. If he does not, his buyer for that particular article leaves him and goes elsewhere. An old-fashioned merchant, who looks to his own business and manages it, is not altogether governed by the question whether he loses that 140*l.*, but whether he should lose that and make it up on something else. He must keep a stock.

2856. Then the merchant you are speaking of is not a mere intermediary between the producer on the one side and the consumer on the other?—I am not speaking of an agent.

2857. But the old-fashioned merchant, one witness informed us, is now almost extinct?—I should have thought not. It appears to me that the tendency of trade is rather to revert to that specimen. I mean to say, that many years ago there was a very large consigned business. Manufacturers were ready to consign their goods. Well, they found out, I think, wisely, that that is not their business; that their business is to sell to the merchant, taking their profit and loss on this side, and the merchant takes his chance of profit or loss on the other.

2858. Then we assume the merchant has engaged in this transaction, and quite apart from exchange it has produced a loss to him of 140*l.*?—That is so.

2859. Now we have reached the 30th June. On that day the exchange was 3*s.* 4½*d.*, and we have shown so far a net trade loss of 140*l.* 15*s.* Will you go on with your account of this transaction?—Then the yarn is sold at a varying credit from a month to two months. It is commonly called cash, but there is no such real thing as a cash sale, it is practically a month or two, and if you will notice the chart you will see that the actual course of exchange was that on the 30th July it was 3*s.* 3⅜*d.* and it fell to 3*s.* 2*d.*

2860. By what date?—The following fortnight it had fallen to 3*s.* 2*d.* and continued so for a month. The money coming in was remitted, of course, at the lower rate.

2861. That was about the 13th August?—That would be so.

2862. And that produced a loss of?—76*l.* 15*s.* from the difference between silver and gold, the difference of exchange.

2863. Now will you give us another example and go through that in the same way?—The next is an example of exports from the same market in which the merchant buys 100 tons of pepper, which is one of the main commodities of Singapore, to ship to London at the market price, 23 dollars p. pl., which is 6,037*l.* 10*s.*, the exchange being then, on the 6th August, 3*s.* 1¾*d.* the dollar. That gives 6,037*l.* 10*s.* This, in his opinion, being a dear purchase, he takes a view of the market and thinks to buy better by waiting. He waits until the 19th November, which is the time when the pepper comes generally freely to market, and he buys on the 19th November. He is so far right about his price, as the currency price has fallen from 23 to 21·50 dollars, and presumably, therefore, he was a wise man to wait, because had the exchange remained as it was at the time he bought, he would have received for 5,550*l.* instead of 6,037*l.* 10*s.*, the same quantity of pepper. But then silver takes another course, and instead of going down it suddenly goes up during the latter part of this year, and by the time he has bought his pepper and wants to ship it, he finds the exchange instead of 3*s.* 1½*d.* has become 3*s.* 5*d.* on the 19th of November.

2864. What is the result of that rise in exchange?—The result is that he pays 400*l.* more for the same stuff.

2865. So that when he proposed on the 6th of August to buy, instead of having to take an element of uncertainty into consideration he has, owing to the uncertainty in exchange, to take two elements?—That is so.

2866. The one is a possible fall in pepper, the other the possible rise or fall of silver as the case may be?—That is so.

2867. That, as a matter of fact, hampers him in the transaction of his business and involves him frequently in loss?—Yes.

2868. And if it does not involve him in more loss than gain, it adds a gambling element to business from which it would otherwise be free?—Distinctly. Because it is an element over which he has absolutely no control, and which is purely uncertain. It has nothing to do with him, and he has no possible means of affecting it one or the other.

2869. (*Mr. Barbour.*) Does a merchant find it possible to foretell what the exchange is likely to be for some months?—That I think is utterly hopeless. There may be times when you can make a prudent forecast, but in the case of last year, I do not think anyone could possibly do so.

2870. (*The Chairman.*) There are two arguments which have been brought against this view which you have been explaining to the Commission. It is said in the first place that the merchant can protect himself by engaging in a converse transaction of import at the same time that he engages in a transaction of export. Do you attach weight to that argument?—I say that it is utterly valueless, because the two classes of merchants are not the same men. There is a large number of houses that do nothing but export goods from this country, and who never have a pound of imported produce. On the other hand, there is a large number of houses that import foreign produce, and who never ship a piece of manufactured goods.

2871. Is it not the case that though an individual merchant might not engage in these double transactions he might get himself protected by the banks who are the intermediaries for both kinds of transactions?—I admit that there are cases in which the bank can do that, but with all deference I submit that it cannot be done without an element of

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risk coming into it. I do not believe it is possible. I do not think you will find an eastern banker who will tell you that it is possible for him on the course of the whole year to so precisely equalise the transactions of imports and exports, that by selling forward in this manner he is free from all risk and possibility of loss.

2872. Can you give us any figures showing the amount of insurance, if I may call it so, which the bankers charge their customers on account of this uncertainty?—No, that would be utterly hopeless.

2873. (*Sir T. Farrer.*) Could you give us any sort of notion of what proportion of the trade to the East is carried on through the medium of the banks, by which the merchants protect themselves, and what proportion is carried on by merchants taking the risk upon themselves in transactions of this kind?—If you take such a case as this last one which I have described, I think it was an impossibility for a merchant to bring the banker into play until the last moment. He forms his opinion in August as to the course of the market. He finds the price of an article is higher than he is willing to pay for it; he therefore resolves to wait till November, thinking the price would be lower; his view is borne out, and there is a fall in exchange, but there is a sudden advance in silver. That is a variation of which he must take the whole risk. In regard to exchange, he must wait till the stuff is bought before he sells his bill.

2874. (*Mr. Birch.*) And the variation of price may have had to do with the variation of exchange at the same time?—I am giving an illustration where the supply of the commodity was the main element affecting the price, not the price of silver, as affecting it.

2875. I suppose it has to do with the price at which it is realisable over here. You would buy pepper at Singapore with the intention of selling it over here at a profit?—Clearly.

2876. Just as the price varies here, so it will vary over there?—Undoubtedly, only more generally, the price on the other side is higher than the price here.

2877. Therefore the exchange might be affected by the very fall or rise in the price over there?—I should reverse the statement, and say that the fall or rise in the price over there might be affected by the exchange.

2878. (*The Chairman.*) You have so far given us some account of the loss to merchants in the East and in England from the uncertainty in exchange. Could you now give us some account of the loss which you believe to accrue to capitalists in England who invest in the East, say in Singapore? Perhaps you would be able to give us your views more clearly if you chose the concrete example of a particular company and a particular investment?—The largest company in Singapore is a Dock Company. It is a company with a million dollars capital, and has uniformly paid its 10 per cent. The shares are 100 dollars each, and to vary the illustration I have given in my memorandum I will give you an actual transaction. I had recently a transaction to put through which was of this character. An amount of 3,000*l.* had been invested before 1873 in shares of the Dock Company. The value of the Mexican dollar at that time was 4*s.* 6*d.* The dividends have been remitted annually to England, and the 10 per cent. dividend, of course, has varied in this country according to the exchange. It has sometimes been 9 per cent. and sometimes 8 per cent., according to the price of silver as compared with gold. The estate in which this 3,000*l.* was had to be closed, and the shares were sold. The shares were sold at the price or a higher price than they were bought at, and the loss to the estate was about 20 per cent. upon the original investment. That was from the fact that the dollar, which at the time of the investment had been 4*s.* 6*d.*, had fallen to 3*s.* 3*d.*

2879. (*Mr. Fremantle.*) And had the price of the shares at Singapore remained the same?—They sold at a better price because the undertaking was a successful one; they sold at a profit, but there was a large net loss on the original capital.

2880. (*The Chairman.*) That is only an example of the loss to English investors in silver-using countries before the uncertainty in the relative value of gold and silver occurred?—A loss arising from the disturbance in the ratio since 1873.

2881. (*Sir T. Farrer.*) Was this a company that paid a fixed rate of interest or a rate of interest founded on its profits for the year?—It paid a dividend according to its profits. I think it would be possible to show the Commission an estimate of the amounts invested by banks and by merchants by way of fixed capital in industrial occupations, and otherwise in silver-using countries before 1873. It must be millions upon millions. Well, if these millions of money were to-day converted into gold; if the banks wanted to get home their money they lose from 20 to 25 per cent. on the original investment, and the consequence is this that as nobody knows what silver may be worth five or six years hence, you cannot, so far as my experience goes, get a penny of British capital to invest in a silver-using country. The promoters of railways know that not a sixpence of capital can be got for such undertakings as that so long as the uncertainty between gold and silver remains.

2882. (*The Chairman.*) So that the evil that you point out to us is not merely that investors have been hit hard by things that have occurred, but that these countries are being injured. English investors have been so thoroughly frightened that they will not invest in that particular country?—Yes, and I say further that British capitalists are injured, because I think that from 15,000,000*l.* to 20,000,000*l.* might be earned as an annual dividend on money in England for investments in silver-using countries if the money could be protected from the effects of this uncertainty.

2883. This evil is quite distinct from the evil from which those suffer who have invested in gold-using countries a large amount of money in fixed capital, and who, owing to the fact that there is a fall in price, could now only realise at a considerable loss?—Entirely different. There is one remark in Mr. Van Den Berg's memorandum which bears on that. He makes the remark that the German companies were said to have offered loans to the Chinese Government to the extent of 35,000,000*l.*, which might appear to show what I am now saying is incorrect, but that was an apochryphal operation. I am not aware that any syndicate did offer, but if they did, it was a sterling loan, with dividend payable in gold and capital repayable in same, and you may get all the money for Indian and Chinese railways in this country so long as you undertake to pay the dividend and principal in gold. But that involves an additional charge upon the industrial undertaking wished to be carried out in the other country. They must then take the loss from the difference between silver and gold.

2884. So that one of two things happens: either the English merchant has to take his dividend in silver, and in that case he will not invest, or the Eastern country has to take the risk of paying in gold, and then they will not ask the English merchant to invest?—Because they would need to have a commensurate addition to their profits.

2885. So far, I think, you have simply been dealing with the evils that occur owing to the uncertainty in the rate of Exchange. Are you of opinion that through the fall in silver, quite apart from the uncertainty in the ratio between silver and gold, a permanent stimulus has or can be given to the Eastern producer?—It think it is inevitable that it should be so. I know the question is disputed, but I do not see how it can be otherwise.

2886. Please give us an illustration of what you mean?—If I had 1,000*l.* which is transferred to a silver-using country, say, to the Straits Settlements of which I am speaking now, and when I transfer that money, let us say, the dollar is worth 4*s.*; I shall have 5,000 dollars put out on the other side into an industrial undertaking. But with a fall in silver

I could transmit so many more dollars, my sovereign becomes worth so much more, and the consequence is that I or the person who is operating for me has more of the currency of the country to invest in the particular operation. Now it appears to me that that must be, and I think facts bear it out, distinctly favourable to the country that is on the silver currency.

2887. But what profit do you, the English investor, what additional profit do you get out of it?—The producer in the silver-using country receives more currency for all he produces.

2888. But has he to pay the English investor, his creditor, in gold or in silver? I am now taking the case of the planter to whom you assume that you have lent your 1,000*l.*; he has to pay you interest, of course, on that 1,000*l.*?—I was assuming that it was my plantation; I was working it, and my produce would bring more in silver currency than it has done before.

2889. If your planter, or if you as planter, are producing for the English market, and in the meanwhile gold has risen in relation to silver, you do not get anything more?—It does not follow that I am producing for the English market; I may be producing cocoanuts to be used on the spot, and which never come to this country at all; I may be producing tobacco, and the whole of the produce of my plantation may be sold to the native population. So long as I spend my money in the silver district, where silver is the currency, I have an advantage, and it is only the instant that I change that silver into gold that my loss begins.

2890. Does not that amount to this, that gold having appreciated the owner of 1,000*l.*, now really has a greater command of commodities both in England and in the East than he had before, and among other commodities of which he has a greater command, silver is one, and that, therefore, it is possible that he may obtain an advantage if he uses the silver which he buys with that 1,000*l.* as capital in a silver-using country, selling the produce of that capital in the same country, but that must be a very limited case?—So long as he does so, and his money is not required to be transmitted home, so long he is in a better position.

2891. But that does not touch the great wheat or the great cotton producing industries of India. They are not seriously stimulated permanently in your opinion by this fall of silver in relation to gold?—I think obviously, and, I think, the proof is that the whole creation of the manufacturing industry in India practically dates from the demonetization of silver.

2892. Before coming to that, these industries in India, at all events, do not profit in the way that you have just explained to us, you would profit if as the owner of a thousand English sovereigns you were to become a planter in Singapore. That is not the mode in which the export is stimulated, is it?—The grower of Indian produce has now 15 rupees as the equivalent of each sovereign whereas he had formerly only 10, and his enterprise is stimulated in the same way as enterprise in this country was stimulated when there was a great increase to the currency after 1850.

2893. Let us go to the case of a manufacturer in India. Would you explain to us how you think he permanently benefits by the fall?—He benefits because he is in a country where the standard is depreciating.

2894. Prices have fallen in India if they have moved at all, even estimated in silver, have they not?—There has been so very much discussion as to the course of prices in India that I think it is a somewhat doubtful thing, but, theoretically, there are reasons why that effect has not been produced in silver prices so far as it might have been, because the volume of the currency has not been increased as I expected it would have been; but the man who is the manufacturer in India in the first place has a freedom from the burden which the manufacturer in this country has owing to the increasing weight of fixed charges, that is to say, rent, taxes, and rates, which are growing heavier and heavier in this country, but which do not affect him there.

2895. You mean growing heavier through the appreciation of gold?—Yes, distinctly growing more difficult to meet. He has to produce more stuff if he is to meet them. But the man on the other side is not open to that, as his wages have not been affected, I understand the rate of wages has not risen in India. More than that the Indian manufacturer has a market open to him in China and Japan, as is shown by the large exports from India, which are unaffected by this question which, I say, affects trade between silver and gold using countries. He has a common standard of value with the whole of the silver-using East, which is an enormous market, and the exports from India show conclusively that the Indian yarn is steadily supplanting the yarn manufactured in England, and it must be so.

2896. (*Mr. Barbour.*) Is that not only the coarse yarn?—I know it was said that India would only manufacture the coarse yarn out of Surat cotton, but the process of manufacture has very much improved, and they are now building a mill in Bombay to turn out 30's or 40's yarn.

2897. Is not the building of that mill so far an experiment? It is being built but the yarn is not in the market?—The yarn is not in the market, but I think a manufacturer would say there is no reason why the experiment should not succeed.

2898. (*The Chairman.*) Then you do not hold that the stimulus to the exports of India from the fall of exchange arises from the different ratio between gold and silver; it arises from the fact that the Indian manufacturer is not subject to certain grave inconvenience which the English manufacturer is subjected to owing to the appreciation of gold?—I think that is largely so. I think the Indian manufacturer is very much in the position that the British manufacturer was when gold was depreciating in this country, prices rising, and taxes and charges becoming lighter.

2899. Really it is due to the fact that the Indians have got either a stationary or a depreciating currency?—Largely so: but the advantages of being able to trade with the whole East upon the same standard of value, silver, are incalculable.

2900. Can you now give the Commission any facts illustrating your views, drawn from the commerce between Holland and Java? First of all, let me ask you whether you do not think that that particular commerce is of importance in this case since Java is in other respects exactly in the condition of Singapore but has either a gold or a bi-metallic currency?—Yes, I think the commercial conditions of Java and the Straits are similar, subject to the conditions of government which are very important. Java has been subject to very severe taxation.

2901. You are distinctly of opinion that you cannot deduce anything from "commissariat" prices, they are misleading?—I think they are most misleading.

2902. The facts that you have just explained to us about Java rather complicate any deductions you would make as to the state of the commerce between Holland and its colony, do they not?—Yes.

2903. Subject to those deductions could you draw any inferences from that commerce?—I think apart from causes which have been special to Java, the main fact remains, that over a very long period the fluctuations in Java exchange with England and Holland have not varied appreciably, by which I mean to say that they have not varied by 2 or 3 per cent., not sufficient to be a serious drawback to any commercial operations on an extended scale for a long period, whereas during the same period the fluctuations in the Straits Settlements have varied to the extent of 20 to 25 per cent.

2904. I suppose the exchanges with Java have never varied by more than the cost of transporting specie?—Exactly.

2905. (*Mr. Barbour.*) The standard in Java is a gold standard, the currency is silver but the standard gold?—I submit not. I cannot understand a gold standard

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where gold and silver are both an equal legal tender in discharge for debt to any amount at a fixed ratio. That is the position of Holland and her colonies.

2906. (*Sir T. Farrer.*) Is not Holland in the same condition as France and the Latin Union when they suspended the free coinage of silver?—Yes, but I cannot admit that a country is on a gold or a silver standard so long as both metals are legal tender to any extent for a debt.

2907. (*Mr. Barbour.*) All I wanted to know was whether although the coinage of silver was suspended, the coinage of gold was still free?—Yes.

2908. (*The Chairman.*) And coincidently with that all debts may be paid in either the one standard or the other?—Yes.

2909. Both to the Government and the ordinary creditor?—Yes.

2910. Do you think that you could show from the state of the commerce of Java that it has gained by this stability of exchange which, as you inform us, has lasted to the present day?—I think it is to be shown, taking up the last illustration we had with regard to silver-using countries, by the question of investments. This is the official statement of industrial investments in Java. They aggregate about 20,000,000*l.* sterling roughly, and the Government have spent, I suppose, a much larger amount. These undertakings have all been gone into quite in recent years, and if you wanted double the amount tomorrow you could get it, because of the stability of the currency. There is one of the largest of these undertakings which is called the Netherlands India Steam Company, and it has lines throughout the whole of the Archipelago. Now the Netherlands India Steam Company publish their accounts in this form. On one side they put their currency, so many guilders and the dividend at so and so and on the other they put the fixed sterling, and year by year it is a matter of perfect indifference to you whether you are resident here or on the other side, you have the exact equivalent, and you know the exact amount you will receive; I say if you could make any such balance sheet for a railway in India you could get money in London by the million. If you could do it in the Straits Settlements and the Malay Peninsula we should be able to get 100,000,000*l.* of money, enough to cover the Malay Peninsula with railways.

2911. In fact, your opinion is, from a study of the English money market, that Java has no difficulty in inducing English investors to invest in any movement that Java desires, and that other countries having a silver currency cannot get English investors to invest any sum at all?—There is no difficulty in obtaining capital where dividends and repayment of principal are guaranteed according to the lender's standard of value.

2912. Some authorities, notably Mr. Van Den Berg, say, with regard to the prosperity of Java: "The "only conclusion to be drawn is that during recent "years the state of affairs, as far as European enter- "prise is concerned, has been quite the reverse of "prosperous; and, considering the large place "European enterprise occupies in the economical "development of this colony, it is not to be wondered "at that the same conclusion also applies to the "general welfare of the country. No doubt the crops "of rice and other food grains have been uncommonly "plentiful for the last two or three years, and it is "not to be denied that part of the native population "have benefited by the low prices ruling accordingly; "but low prices of rice are no unmitigated boon to "the people, who have to pay their land rental and "other direct taxes, not in kind, but in money. "When there are no buyers to be found for the rice "in store, money must be procured by the sale of "other things, such as household furniture, clothes, "domestic animals, &c., in order to meet the exigencies "of the tax collectors, and thus a plentiful crop may "become a source of distress for many. At all "events the total ruin of a portion of the European "planting interest, and the precarious position of other "planters, who, to make head against their present "difficulties, have had to observe the strictest economy "in regard to wages and other expenses, have caused "a good deal of harm to the native population by "limiting their means of subsistence. Both natives "and Europeans have been experiencing very hard "times during the last two or three years, and an "almost universal decline in the general welfare of the "country is only but too evident"?—Yes, and I think you will find the explanation here: Mr. Van Den Berg says:—"All would have gone on well as before had it not "been for the prices of nearly all the principal staple "articles of export falling to a level, scarcely leaving "any profit at all." Now the fact is, that during the last five years Java has been subjected to a series of most fearful natural calamities. They have had cattle plague, which destroyed almost the whole cattle in parts of the island; they have had cholera; they have had earthquakes of an unprecedented character, and they have further had an extraordinary fall in the values of their principal exports, which are sugar and coffee, owing in the first place to the competition of beetroot sugar in Europe, and in the second place to the fact that the silver-using country of South America has been able to import coffee more favourably than from Java, and to this extent you can trace a loss of 5,000,000*l.* annually in these two articles. That has been the result in the last five years of natural causes, without any question of currency at all. Mr. Van Den Berg distinguishes here between other causes and currency causes, and, from what I can see, what he says about currency is fair enough. If you had such a state of things as in British India, *i.e.*, a depreciating standard, it would have stimulated productions of all sorts. If, on the other hand, you were to introduce it now, you would have the natives suffer from the increased price of their goods, and he puts it, weighing one set of conditions against the other, that you had better leave things alone, *i.e.*, with gold and silver both legal tender.

2913. Then your view of the condition of Java may be put in this way, apart from the various plagues and famines which you have detailed to us Java has gained owing to the fact that investors are prepared to invest in Java, in consequence of Java having a stable standard. Java has lost compared with other similar settlements in the East, owing to the fact that there has been none of that stimulus in the export trade, which, as you have explained to us exists both in Singapore and British India?—That is exactly it.

2914. In your opinion the evils which you have explained to us as occurring both to the British merchant and to the British investor, would be obviated, if through a double standard the stability of exchange was established?—I believe they will be eliminated.

2915. (*Mr. Barbour.*) I think you said that the merchant could not always fix his exchange with the bank, as sometimes the bank would not take the risk?—Yes.

2916. And I suppose in any case a bank would not take a risk for more than a certain period?—Clearly not.

2917. You could not cover a transaction six months ahead?—I think no banker would do such a thing, unless he had secured himself, or else charged such a profit as he considered covered the risk.

2918. (*Mr. Courtney.*) Would not a bank discount a bill running some months on India?—Yes; Eastern banks do so.

2919. Does not that involve a question of considering what the exchange would be some months hence?—It involves it for four months, and they would certainly charge the customer a rate that would leave them profit. Four months is the usage between England and India.

2920. You qualify your answer to Mr. Barbour so far as to say that a banker would make an arrangement for four months?—I do not deny that.

2921. (*Mr. Barbour.*) I asked you if a bank would take a risk for a very long period, say six months?—

Four months would be the usance generally, for six months they would charge proportionately.

2922. (*Mr. Courtney.*) Would four months be sufficient to cover a merchant's risks from exchange?—As a rule he could not buy and sell in London within four months. He could not realise his produce in four months from the moment he bought it.

2923. Your examples do not run over three, I think?—The 10th of April to the 13th of August.

2924. Just four months?—Just four.

2925. The period over which a bank could and would cover the risk?—That operation was a somewhat unusual one, for the sake of an illustration I assumed. It was sold immediately.

2926. It is the business of a bank to discount bills running four months?—Yes, and to charge their customer for doing so.

2927. And so far it must undertake the risk of exchange for four months?—It charges its customer for that risk, and its business is to make a profit on all such transactions.

2928. Your view is that gold has been appreciated, not that silver has depreciated?—I think gold has been distinctly appreciated in this country.

2929. And silver has not been depreciated?—Silver has no purchasing power in this country.

2930. Well, but it may be depreciated all the same?—If you mean to say the market price of silver is 20 per cent. lower than it was, that is on record.

2931. Quite so, but that is measured by gold, and it may be that it is lower than it was, because gold has appreciated and not that silver has depreciated?—It may be so, but there is evidence of both.

2932. (*The Chairman.*) I think your view is that the causes which have made this variation or this fall in the value of silver in relation to gold, rather affect the demand and supply of gold than the demand and supply of silver?—My view of the fall in the value of silver is that the demand has been checked for it, that the demand which formerly kept up the price of silver, which mainly was for the manufacture of money, is gone. No silver is being coined in Europe; practically it has been all stopped; therefore the demand for the metal for that purpose coming to an end the prices must have fallen from that cause alone.

2933. Then your view is that both operations have occurred?—Both have happened, I believe.

2934. That is to say, that silver, regarded as a commodity, is of less value compared to other commodities than it was?—Yes, it is so.

2935. And also that all commodities are of less value in relation to gold than they were, including silver?—Clearly.

2936. (*Mr. Courtney.*) The effect, at all events, of what has happened you believe to be a great stimulus to industrial occupations in silver-using countries?—I think it has been entirely to the benefit of silver-using countries.

2937. And, therefore, great advantage is secured to those who are going to engage in industrial occupations in silver-using countries. According to your own example, a person with a certain quantity of gold about to embark in industrial occupations in a silver-using country has received and is receiving a great advantage?—So long as his operations are confined to the silver-using country.

2938. Then the effect of the change has not been to discourage the direct occupation of an industry in silver-using countries?—I have stated, that if it could be assured that the money invested in a silver-using country was never to be wanted back again from that country to this the advantage is great to the producer in the silver country, and in the Straits Settlements all the Chinese at this moment are becoming wealthy. Through this fall in silver everything that they have is more valuable than it was. Their land has risen, and so forth, and they get the benefit of it, taking their profits to another silver country. If, on the other hand, an English investor wants his money back he is at a disadvantage. While the money is in that colony it has an additional value to the man who uses it, but the moment he wants to send it home and convert it into sterling he must take his loss.

2939. That is the case of a person who has sent out the money some time ago, but taking the situation now, is it an encouragement to a person now to engage in an industrial occupation there?—If he accepts the view of the "Economist" newspaper clearly not, because it says that the rupee may fall to 1*s.* If he makes his investment while the rupee is 1*s.* 6*d.*, and if the silver rupee is to go to 1*s.* his loss when he realises would be to that extent.

2940. If you anticipate that fall of the rupee to 1*s.*, is that due to a further appreciation of gold or to a further depreciation of silver or both?—I think mainly to a further demonetisation of silver, which seems inevitable.

2941. That is a depreciation of silver?—Clearly.

2942. Would not that affect the silver prices of all commodities in silver-using countries?—Yes, but very gradually, so long as you increase the currency of the country by fresh coinage of silver you will raise prices in those countries.

2943. So that if your rupee fell from 1*s.* 6*d.* to 1*s.*, prices in silver-using countries would rise correspondingly?—Not necessarily, and certainly not coincidently. As a matter of fact, the effect of the fall from 1*s.* 10*d.* to 1*s.* 5½*d.* in India, as far as I know, has at present been infinitesimal.

2944. Yes, but you have already said that the fall that has taken place, is due to the appreciation of gold as well as to the depreciation of silver. I am calling your attention to the point that silver in future is depreciated and through the depreciation of silver the rupee falls from 1*s.* 6*d.* to 1*s.* You would argue from the phenomenon of India during the last 15 years as to what would happen in the future, supposing the change is due to that cause alone. If there was a change from 1*s.* 6*d.* to 1*s.* due to the depreciation of silver, would not silver prices in silver-using countries be affected correspondingly?—I should agree that they ought to be, theoretically, and that if the currency of India were largely increased by free unlimited coinage of silver, you must have a rise in prices, but arguing from the last 15 years I could not expect prices to accommodate themselves to the value of silver except very slowly.

2945. So that there would be some compensation, at all events, to the person engaging in an industrial occupation in the East, even if he wanted hereafter to realise; he would get more silver for what he had to realise and sell?—He might do.

2946. And possibly get back all the sum in gold?—I have given you that actual transaction, in which the man sold at a considerable advance on his original investment, and still made a loss of 22 per cent. It would require a great rise, of course, in prices to make up such a difference as that as from 1*s.* 6*d.* to 1*s.*

2947. No doubt; but this depreciation, as I pointed out to you before, is hypothetically due to appreciation of silver. The change in the historical example which you recapitulate is due to two causes; you admit probably more to the appreciation in gold?—No, I gave that case as a distinct illustration of the depreciation of silver; I gave an actual transaction. The investment was made in 1872, I think, when the dollar was 4*s.* 6*d.* The amount was remitted home at 3*s.* 3*d.* The advance in the silver price of these shares was considerable, but in spite of that the realisation in gold showed a loss.

2948. Yes, that is just what I say; that example of what has happened during the years from 1872 to 1886 or 1887, in which you admit the change between gold and silver, is due partly to the appreciation of gold and partly to the depreciation of silver, possibly more to the appreciation of gold than to the depreciation of silver?—I am not prepared to say that. I say I anticipate a further fall in silver from a further demonetisation of silver.

2949. The point I wished to bring out was that a person directly engaged in an industrial occupation in the East at present, going into it for the first time,

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receives, you admit, a considerable benefit?—While this investment is in the silver-using country.

2950. A person engaging at present in an industrial occupation in the East receives, according to your position, a considerable advantage?—In the East.

2951. And that advantage will continue unless silver falls still more in relation to gold?—Yes.

2952. If silver by chance rose in relation to gold, the advantage there would cease, but he would be able to remit home more than his original capital?—Quite so.

2953. So that on that side he has a sure gain as long as the depreciation lasts, and realisation at a profit if the depreciation turned?—That is so.

2954. If the depreciation went further, you say he would only be able to send home at a loss?—Yes.

2955. The point I wished to find out was whether a further depreciation would not be compensated by a rise in prices there so that the moment he realises, the rise in prices there would counterbalance in some degree, if not entirely, the loss on remittance home?—Well, I am only able to answer that by saying that it is an impossibility for me to give more than an opinion founded upon what has actually been happening. I can only say that theoretically the prices in the silver-using country would rise; that the prices of land would rise, and of commodities would rise. Ultimately, they ought to do so, but that their rise might compensate for the fall in silver in such time as would be likely to assure a supposed investor I do not believe.

2956. (*The Chairman.*) The conclusion to which Mr. Courtney's questions point would be entirely accurate in your view if the whole cause of the depreciation of silver in relation to gold were a fall in silver and not the appreciation of gold, and if, besides that, the probable effect of a rise in prices in silver-using countries were felt at once to its full extent?—Clearly.

2957. If both those conditions were not completely fulfilled then the supposed investor would lose when he tried to realise and transmit his gold?—Clearly.

2958. (*Sir T. Farrer.*) If the smaller quantity of gold received has risen from appreciation of gold, is not the smaller quantity of gold received equal in real value as regards commodities to the larger quantity which he invested?—You appear to me to assume a sort of perfect machine in which everything is to simultaneously adapt itself to something else, but, if you pardon me saying so, it does not seem to be a business machine. I know, as a matter of fact, that trade does not work so well and prices in silver-using countries do not spring in the way Mr. Courtney suggested, and I say if you want a test whether people accept his view of the situation, try the London market, and see what money you can get to put into an industrial occupation in a silver-using country. Ask the Indian Council how much money you would get if you guaranteed the dividends and the principal in silver.

2959. I am dealing with the question of a person engaging directly in industrial pursuits. Your reference to the borrowing of money is not the case of a person engaged directly in an industrial pursuit, but of lending a fixed sum of money to be repaid by a fixed sum of money in rupees, a totally different question. I thought you yourself, in answer to the question of the Chairman, dealt with a case of a person engaged directly in an industrial pursuit, whether indigo or pepper?—If you suppose me to go to the Straits Settlements with 1,000*l.*, and invest it in a pepper plantation myself, I agree with you that so long as I stay in the Straits Settlements I have the advantage of the fall in silver; and that if silver falls more, it benefits me while I am there; but if I want to come back to this country then my position is entirely reversed, and I lose the advantage, because I have to convert that money again into a gold currency. That is what I understand you to mean by directly interested in an undertaking.

2960. Quite so. I wished you to separate, in your mind, the two cases: first, of a person who takes his capital out, or sends it out to an agent and works it himself, and next a person who lends capital on loan to be repaid in the silver of the country?—But in such countries as ours no European could do such work as this. The capital invested is mainly that of Asiatics, who work these operations; it is not done by Europeans.

2961. Have Europeans not hitherto engaged in coffee plantations and in indigo work?—Scarcely at all. The Straits Settlement cultivation is carried on almost exclusively by Asiatics.

2962. Has there been any difficulty in obtaining further capital to invest in cotton mills in Bombay?—I cannot speak of Bombay; I can only speak of my own colony, and I can say you would not get 6*d.* for it. If you wanted to build a manufactory there, and were to ask for the capital to be supplied you here in gold, you would get nothing, unless you undertook to repay the debt and the dividend in gold. I can conceive it possible in Bombay, because a man might go to Bombay and directly engage in the business, and he could ship his yarns to other silver-using countries.

2963. (*Sir T. Farrer.*) You say there is great difficulty about getting money for investment, but is not one of the subjects of your complaint to-day that India is competing successfully with Lancashire in consequence of the divergence of gold and silver?—I think the Lancashire manufacturer is distinctly handicapped as against the Indian.

2964. Have the cotton factories in India any difficulty in finding the capital?—I am not able to speak as to that, but I understand the capital has been subscribed mainly in silver rupees.

2965. But when a person invests money either in the Straits Settlements or in India in an undertaking which is to produce a certain quantity of cotton or of other produce it is the quantity of produce that is produced, and the expense of producing it that govern the profits, do they not? After all that produce has to be sold?—Yes.

2966. It has to be sold for a greater or a less quantity of silver if in India?—Yes.

2967. And that silver may have to be changed against gold if it comes back to this country?—It must be.

2968. But it is the produce, is it not, which governs the profits. The fact that it is exchanged through silver and through gold for something in this country does not signify; those are only intermediaries. If a person invests money to be repaid at a fixed interest one can quite understand that that is a different thing, but if he invests money in something which is to produce cotton or corn or anything else it is the quantity of corn and the quantity of cotton which is produced that will govern the profits, is it not?—In the country in which he is manufacturing, yes.

2969. Then if more of that cotton is produced, and it is sold against a certain quantity of gold, and that gold against a certain quantity of commodities in England, it is the quantity of Indian commodities against the quantity of English commodities which governs the profit, is it not; and what difference does it make what the relation of those intermediaries is to one another?—Are you assuming that the manufacturer sells upon the spot?

2970. No, I am assuming that a man has invested in something in a country which has a currency very different from our own. How can the intermediate currencies through which the profit travels alter the real amount which comes back to the investor?—The conditions you are assuming might be reasonable enough for a scholastic discussion but are not realised in the routine of commerce. I have explained that the exporter of goods is by no means necessarily the importer of produce, and the exchange, therefore, of Indian and Eastern commodities is neither simultaneous nor co-equal. The investor operates with the view to gain an additional amount of his currency than he had before, but if he receives it, it

by no means follow that he invests this profit in commodities. A case in point is before me. A planter remitted to his London agents a certain sum from Java as his surplus profit for the year with the order to invest it in consols. Now from the comparison I have drawn between stability of currency in Java with the frequent and capricious fluctuations in the adjacent colony of the Straits Settlements, I think it is clear that the amount coming back to the investor would bear the same proportion to his investment as it did when that investment was made, whereas in the other case, owing to the depreciation of the currency relative to gold, the proportion would be much less. The amount of gold he would receive being less, his annual income from its investment in consols would be proportionately reduced. Even if we accept your assumption (for the sake of argument) that each item of Eastern produce is exchanged for another item of home produce, still it appears to me evident that so long as the different currencies are allied to standards of value which are subject to frequent and violent disturbances in their relation one to the other, great changes may arise in the real amount coming back to the investor from capricious relationships existing between the currencies through which it passes.

2971. Then I was going to have said something to you about the comparative prosperity of the Straits Settlements and of Java, but I understood you to say that though the Dutch currency system had given Java the advantage which you have explained, there were other counterbalancing disadvantages. The Straits Settlements are in a place in which they trade very freely with Java and the Dutch Settlements, with India, and with the United Kingdom? —Yes.

2972. *Cæteris paribus*, you would expect to find that the commerce of the Straits Settlements would increase more rapidly where there was no fluctuation of exchange as is the case between those settlements and India, than where there is fluctuation of exchange, as there is between those settlements and England and between those settlements and Java?—I should expect the Straits Settlements to show an abnormal development from the depreciation in silver, and I think they have shown it.

2973. Yes; I was not speaking of their development. Their exports and imports have increased very largely indeed, but I was not speaking about their development, I was speaking about their trade with neighbouring countries?—The local trade?

2974. Their trade with the Dutch possessions, their trade with the United Kingdom, and their trade with India?—That comprises the bulk of their trade.

2975. Now the Dutch possessions have a gold currency, have they not, or any rate they have a mixed currency which does not fluctuate with gold countries? —It is what is called a "limping" standard as explained (2905-8). The currency is entirely silver.

2976. Then I find that between 1871 and 1885 the trade between the Straits Settlements and the Dutch possessions has increased by nearly 5,000,000*l.*, or 158 per cent. I find that their trade with the United Kingdom, which has a gold standard, has increased by about 2½ millions, or about 58 per cent.; and I find that during the same period their trade with India, which is close in their neighbourhood, and which has the same silver standard, has increased by a million and a quarter, or 47 per cent., that, therefore, their trade with the Dutch possessions and England has increased a great deal faster than their trade with India. I should argue from that that the fall in exchange has not had so serious an effect upon trade as might be supposed?—That is so open to the very obvious explanation that the market for Straits produce is a gold-using country mainly. Java does not use the produce of the Straits Settlements. Pepper and tea and tin are not shipped to Java.

2977. That is exactly the contrary of what I have been saying, which is that the trade of the Straits Settlements with Java has increased faster than it has with any other part of the world?—We must see what the figures represent. I prefer to take the figures from the Blue Book of the Straits Settlements (v. 2 and 3, 1885), because they are not complicated by movements of bullion or specie. So far from showing that "the trade of the Straits Settlements with Java "has increased faster than it has with any other part "of the world" an analysis will bring out the fact that its proportions are really insignificant. The figures are converted into sterling at 3*s.* 7*d.* per dollar, the rate adopted in the Colonial Abstract.

Taking the case of imports first, of the total 3,671,945*l.* in 1885 (and the remark would equally apply to any year) at least 3,300,000*l.* represent trade between the Straits Settlements and England, for Singapore, owing to its free trade policy, has become the entrepôt of the far East. Practically the whole of the imports into the colony from Sumatra, Riow, Balli, and other Dutch islands, consisting of tobacco, spices, gums, canes, tanning material, and dyes, are brought to England for shipment to Singapore, where they are paid for in Mexican dollars, the currency of the Archipelago no less than of the colony. As regards Java, the figures must be applied on the same principle, although not to the same full extent, for between Singapore and Java there is an interchange of a little sugar, coffee, and rice. The export figures show a trade of a similar character, the bulk consisting of English manufactured goods, which from Singapore are distributed throughout the Archipelago.

These returns, therefore, so far from invalidating my argument, confirm it. They prove the stimulus given to production in the far East. The fall in silver enables the natives to obtain much more money for everything they bring forward to Singapore, where they can buy English manufactured goods cheaper than ever. As regards Indian trade, the value of its imports consists mainly in opium, and the exports are trifling.

2978. At any rate the difference of standard and the fluctuations of exchange between those two countries have not prevented an enormous development of trade?—Do not let me be misunderstood about Java and Singapore; do not let the Commission suppose that there is any difficulty about the currency. Mexican dollars are current throughout the Archipelago, so that no questions of exchange hamper trade. But the "enormous development of trade" arises from the depreciation of this currency measured in gold, and is a development not between Java and Singapore, but between Singapore and England.

2979. I think you said that owing to the advantages that silver countries had they were taking the trade away from Lancashire?—I think the Indian mills are taking it away.

2980. I would ask you to look at the returns of the exports of cotton goods and yarn from this country to the different foreign markets, and then I would ask you whether those figures bear out the idea either that Lancashire is losing its trade with India, or that India is cutting Lancashire out in the trade with the other silver-using countries of the East?—That I have no doubt about from figures also.

2981. Then I will ask you to return to what I began with. You have said that these fluctuations in exchange stopped the business on the Manchester market. I suppose if they do that really to any permanent and complete extent, that would show itself in the export figures, would it not?—I never said that it stopped it to a permanent extent. I merely said they stopped it from week to week, possibly for a day, possibly for a week, possibly for a fortnight. It might be that what is at one time impracticable may become practicable. It is a check, is hampering, and an inconvenience to business rather than a stimulus, because if one transaction falls through there is another transaction comes with the next mail.

2982. It is rather an interruption and harassment of business than a prevention of business?—The volume of exports from Lancashire has not fallen off; it continues, but business is conducted under harass-

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ing conditions. I look upon anything that harasses trade as a prevention of full and free trade.

2983. (*Sir John Lubbock.*) Would you not say check rather than prevention?—I say that there is an actual amount of business lost; that is capable of proof. If an order cannot be executed it may be dropped altogether because it cannot be executed within a certain time. That order is lost. If I am an agent I have lost my commission, the merchant who commissioned me has lost his share of profit. Another transaction may come on top of it and I quite admit that the total volume of business for the year grows in Manchester but it does not run smoothly.

2984. (*Sir T. Farrer.*) Then supposing that we do find, as we do find, that the trade of England and of Lancashire with silver-using countries, and with India in particular has grown faster than that same trade with gold-using countries during all the period in which this fall of exchange has taken place you would admit that much as it may have harassed and annoyed trade it has not very seriously prevented the development of trade?—I should not like to suppose anything of the sort. I think you will find it to the contrary if you take a sufficiently long period. Exports to silver-using countries have not increased in anything like the proportion that they might have been expected to increase.

2985. At any rate it has not had that fatal effect which from some of the utterances on the subject we have been told that it has had?—I have been careful not to speak of any fatal effects. It has not ruined but it has hampered, worried, and checked business from causes within control, and which business men have a right to be freed from.

2986. Many statements are made that the English and American farmers are being ruined by the fall in the value of silver, and in the same way, on the other hand, the English cotton manufacturer is being ruined?—I think the English farmer is distinctly being ruined by the competition of Indian wheat, which, at a higher rate of exchange could not be sold at the same price. It is conclusively shown by the Bankers' Union market calculations in Paris. You cannot sell Indian wheat at the same price to-day as you could six months ago, because the rate of exchange is higher. To that extent the English farmer is relieved of that amount of foreign competition.

2987. (*Mr. Fremantle.*) You said that the price of silver, I think, necessarily fell when the coinage of that metal was suspended in France and elsewhere in 1874?—Yes.

2988. You are aware, no doubt that in 1878 the coinage of the silver dollar in the United States which had been suspended was resumed under the Bland Act?—Yes.

2989. You are aware also that the market price of silver in 1878 was at the time of the resumption of the coinage of the dollars about 54*d.* per ounce in the London market?—Yes.

2990. And you are also aware that it has fallen now to 47*d.*, notwithstanding the fact that the United States during the whole of that period has been coining almost 5,000,000*l.*, sterling a year in silver dollars?—Yes.

2991. Then is it possible to say that the action of any State as regards coinage could affect the silver market in the way that you thought probable?—I think you will find that, allowing for the coinage of the 2,000,000 dollars per month under the Bland Act, and the amount of silver which had been coined by the Latin Union previously, there has been an enormous diminution of the amount of silver used for coinage in spite of the Bland Bill operation.

2992. But the coinage of silver had been suspended for some years before the Bland Bill became law?—Yes, partially, but it was only in 1878 that the Union suspended entirely the coinage of five-franc pieces.

2993. And at that time the price had only gone down to the 54*d.* per ounce. Does it not strike you as curious that since the coinage of silver was absolutely increased by 5,000,000*l.* sterling a year, the price should have fallen, and fallen almost continuously ever since, to 47*d.* per ounce?—Not unless you show that the amount of silver taken for the United States is far more than the diminution caused in the demand for it elsewhere.

2994. But surely it must be allowed that the 5,000,000*l.* added by the Bland Bill was an absolute addition to the coinage as it had stood between 1873 and 1878?—Yes; you have had 50,000,000*l.* sterling coined in the 10 years. That is nothing compared with what the coinage would have been had the Union remained open and faith in silver not been shaken. It is not in itself a demand that could keep up the price of silver.

2995. No, certainly not; but it is an absolute addition, is it not, to the silver coinage of the world which existed in 1878? There had been no coinage of dollars for many years before 1878, and there had been no coinage of standard silver in European countries since 1873, and I want to know why 5,000,000*l.* having been absolutely added to the standard silver coinage of the world, the price has gone down since 1878 from 54*d.* to 47*d.*?—Because previously to that demand for silver there had been thrown upon the market the quantity of German silver with the prospect of a further indefinite amount to follow.

2996. Do you know when it was thrown upon the market?—1874.

2997. That is many years before 1878?—But you had a large amount of silver held *in terrorem* over the market up to 1881 by Germany.

2998. You are aware that not nearly all that silver was thrown into the market, and that of the demonetised German silver the larger amount remains unsold?—We knew the amount that was sold, but we did not know the balance that might be sold until in 1881 Germany undertook to make no further sales, for a time.

2999. (*The Chairman.*) I do not think that you quite understand the question. All the causes that tended to produce the depreciation of silver came into operation in 1874, at any rate before 1878. There was one cause that tended in the opposite direction, and that came into operation in 1878; do you not think it a remarkable fact that the chief fall in silver has taken place since the one cause that would tend to its appreciation has been operative?—I think that so far from all the causes of the depreciation of silver having been exhausted prior to 1878, they were more powerful after that period. Prior to 1878 the price of silver had been forced down by the 60 millions sold by Germany and the fear of a further unknown quantity being forced off. But during the five years up to 1878 the coinage of silver went on. In America it was 18½ millions, in Europe 24 millions, showing an annual consumption of 8½ millions. Whereas in the past 7 years from 1878 no silver was coined by the Union and the demand was limited to 35 millions in America and 13 millions in Austria, reducing the annual demand to 7 millions. Other causes were at work from 1878. In that year the Paris Conference met and failed, and similar results attended the next conference in 1881. Meantime a strong movement for the repeal of the Bland Bill arose in America and the President openly supported the anti-silver party. The adoption of gold coinage by Italy intensified distrust in the stability of silver, and lastly, during the period since 1878, while the demand for coinage has fallen off, the annual production of silver has increased 5 millions.

3000. (*Mr. Fremantle.*) But is it your opinion that 5,000,000*l.* a year coined from bullion is inappreciable?—Under the conditions as I have just stated them, I think it is quite insufficient to prevent a heavy fall in silver.

3001. Looking to what the production of the world is?—Yes, and to the stock.

3002. (*Sir John Lubbock.*) With reference to the first question which has been submitted to us, whether

the change in the relative values of the precious metals are due to the depreciation of silver or to the appreciation of gold, or to both these causes, I understand you to say that, in your opinion, it is due to both these causes?—To both.

3003. And without attempting to distinguish how much is due to each, you think that both those causes are largely operative?—I think largely.

3004. I am not quite sure whether I understood your argument with reference to the person who invested money in the shares of a company in a silver-using country. A person invests, say, 3,000*l.* in the shares of a company in India. The shares are supposed to remain intrinsically of the same value, and after a certain time he sells those shares. Silver having fallen, he obtains nominally a higher price for his shares, but still he makes a loss of some 20 per cent. That is your contention, I think, and that is because gold has appreciated 20 per cent.?—Or silver has depreciated.

3005. Silver having depreciated, he realises at a higher price in silver?—He might do that, supposing he sold at the same. I did say in this particular case that he sold at a higher price; his shares had gone up somewhat; his shares were at a premium in silver.

3006. I understood you to say the shares remained intrinsically of the same value. I thought the point was that there was no change in the intrinsic value of the shares?—They were 100-dollar shares.

3007. There was no reason to suppose apart from the changes in the value of the precious metals that they would have been higher or lower?—In the particular case which I gave the premium was the result of the company having been in business 10 years, and paying 10 per cent. dividend, being a successful company.

3008. But he also sold at a higher price?—He got a premium on his shares when he sold them in silver.

3009. Did he get a higher price in consequence of silver having fallen?—I do not think so.

3010. You mean to say that although the silver had fallen he only got the same price?—The premium upon his shares was the natural result of the success of the company.

3011. (*The Chairman.*) It was a silver premium on silver shares?—Yes. The shares were 100 dollars a share, and he sold them, I think, at 107, so he got seven dollars premium upon the shares sold, but that would not involve the relations between silver and gold at all, but arose from the fact that anyone living in the country desired to have those shares because they gave a 10 per cent. dividend, and he was therefore willing to pay 107 dollars for the shares, and hold them, living in Singapore.

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3012. (*Sir John Lubbock.*) Then supposing he had invested in a piece of land, and supposing there was nothing in the circumstances of the case in the meanwhile to alter the value of that land, but silver fell very much in the meantime, he might sell nominally at a higher price, and still make a loss of 20 per cent. when he returns his money?—He does not get more dollars.

3013. Then the silver cannot have altered in value in relation to land?—I want to point out, that prices have not varied practically, as they might have been expected to do theoretically. The price of land and commodities does not rise or fall exactly as your exchange goes.

3014. I understood you to say that silver was depreciated in relation to gold?—Yes, and I say theoretically prices in silver countries ought to rise.

3015. But if they did not rise?—They do in some cases apparently, and not in others; in some cases very slowly and in others more rapidly. A good many other causes came into play; for example, in the Straits Settlements I can see a great many things operating to cause an advance in the price of land that might not arise in Java or British India.

3016. But apart from the question of other causes, when you expressed the opinion that there had been a depreciation of silver, did you not mean that there had been a change in the value of silver in relation to other commodities?—Yes.

3017. That is to say, if silver had fallen other commodities would command *cæteris paribus* a larger amount of silver than they did before?—Yes.

3018. (*Mr. Birch.*) Just now you referred to the very large amount of silver that Germany had thrown upon the market, and the insignificance of the 5,000,000*l.* a year coined by the United States; are you aware of the amount that Germany did sell in silver?—Some 3,000 tons, I think, roughly the value was 60,000,000*l.*

3019. (*Sir T. Farrer.*) I rather gather from the whole of your evidence that your view is that the evils arise during the period of adjustment, and from the fact that things do not adjust themselves so quickly as economists suppose that they would, rather than from any permanent evil?—It is during the period and process of uncertainty and fluctuation that the evils arise, and if you could fix a relation between gold and silver things would gradually adapt themselves to it.

The witness withdrew.

Adjourned till Friday.

Thirteenth Day.

Friday, 25th February 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
THE RIGHT HON. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.

MR. GEO. H. MURRAY, *Secretary.*

Mr. HENRY HUCKS GIBBS was called and examined.

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3020. (*Chairman.*) You are a director of the Bank of England?—A director and ex-governor.

3021. And you have been personally concerned in trade in silver-using countries, have you not?—Yes.

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3022. And besides that, you have given a great deal of attention to the currency question, and to the effects upon trade generally of the divergence which has occurred in the relative values of gold and silver?—Yes, ever since I was at the Paris Conference, at which that question was discussed.

3023. You were one of the English delegates at the Paris Conference of 1878?—Yes.

3024. Do you hold that the effects of any change brought about by this divergence of value depend partly on whether the divergence is due to the appreciation of gold, partly to whether it is due to the depreciation of silver, and partly to both causes combined?—Yes.

3025. What is your opinion as to the actual cause which has produced at the present time this divergence? Has it been due to the appreciation of gold, to the depreciation of silver, or to both combined?—To both combined.

3026. Could you state the causes which in your opinion have led to the appreciation of gold?—The appreciation of gold has been caused by two causes that generally cause the appreciation of any commodity—diminution in the production and increase in the demand; and the increase in the demand has been caused by the demonetisation of silver, and the substitution of gold for it as money in certain nations, just as the depreciation of silver has been caused by the same national act.

3027. Could you summarise in the same way the causes which have led to the depreciation of silver, if in your opinion it has depreciated?—It has depreciated in terms of gold obviously and certainly, because whereas it was before 60*d.* an ounce, it is now 46*d.* or thereabouts.

3028. Has it in your opinion depreciated in relation to commodities?—I should say not. If it has, it is very little.

3029. Have there been any causes which, if uncounteracted, would have caused it, in your opinion, to depreciate in relation to commodities?—Yes, I think it probably would have depreciated in relation to commodities—I speak of India, of which I, myself, I may say, know very little; but I say that it would have been depreciated in respect of commodities.

3030. Will you state the reason why it should have depreciated?—It would have depreciated, I take it, by the falling off in the demand, because it has ceased to be used as money with the same fulness that it was before. The mints of Germany and of the Latin Union are no longer open to the coinage of silver; consequently there is no longer a demand there for silver for that purpose. The silver coins in those countries are still current, and still maintain exactly the same purchasing power that they did, exactly the same purchasing power as the gold there current; but in other countries, in India, for example, where there would naturally have been a great flow of silver into the country, there would naturally also have been something of a depreciation. I speak with great diffidence here, because I know nothing about India. I only speak theoretically. There should, at first sight, have been a certain depreciation of the money as compared with the commodities. The reason why there would have been a depreciation is that silver, their measure of value, was more abundant; and why there is not, I presume, is for two reasons, first, because the demands from here, which demands have been met by Council bills, have been so large that there has not been that great flow of silver into India that might have been expected; and, secondly, because the development of industry in India, the development of the use of railways, (the making of the railways took place of course before the development of industry consequent on railways) has caused more use to be made of silver money. That is to say, there has been more use for silver, and it has therefore not become superabundant.

3031. Will you explain to the Commission how the demand for Council bills has counteracted causes which would otherwise have produced a depreciation in silver?—Because if there were not Council bills, that is, if people could not remit in Council bills, they would have to remit in silver. The sale of bills and the purchase of bills are so many expedients for preventing the necessity of sending coin in a box from one part of the world to another.

3032. But the settlement by such means of all international transactions, excepting the small balance which must be settled by specie, is of very old date?—Yes.

3033. There is nothing new in that?—Nothing; only, as I am informed, the amount of Council bills drawn of late has been much greater. It would seem that naturally it would be greater, because selling the bills is the same as bringing rupees here. Now they have had to bring more rupees in order to pay the amount of gold that is due from them to the services and to the debts of India payable in gold in this country.

3034. But are you not in that statement confusing cause with effect? Would not the ordinary view be that they had to bring more rupees to England to pay their debts because silver had fallen?—Precisely so. That is so; but I am not arguing that silver has fallen on that account, I am arguing that as the reason that silver has not flowed into India, not as the reason that silver has fallen. Silver has fallen in value, consequently they have to bring more rupees to pay the gold. That is a very good reason why they should have to send less rupees into India, or less silver to make rupees.

3035. Then do you attach any value to the large absorbing power which is attributed to eastern countries for hoarding bullion?—Yes. I would say, in addition to what I said before about the trade in India, that I suppose the facilities of communication have added to the power of the natives of that country to do that which they delight in—hoarding their precious metals.

3036. Then I may summarise your view with regard to the divergence in the value of the precious metals by saying that there have been causes at work which would naturally appreciate gold and depreciate silver?—Yes.

3037. That those causes which have depreciated silver have been counteracted by other causes which have practically kept it at the old level as regards commodities, but that the causes which have tended to appreciate gold have not been counteracted by any such cause?—Yes, not by any such causes. I will not say at once whether there has been anything to counteract the appreciation of gold, but I think there has not of late years.

3038. The result has been that silver has remained, as regards commodities, stationary in value, and that gold has risen 23 per cent. in relation both to silver and to commodities?—I think it is difficult to say that gold has risen such and such a percentage with regard to silver and to commodities, because we know exactly what it has risen as regards silver, but we do not and we cannot gauge the exact amount of the rise as to other commodities, as a mass. Properly speaking, "appreciation of gold" is only another phrase for the fall in price of commodities. But I have used the word in the foregoing answers (as it is frequently used in this controversy) to denote the cheapness of commodities (*i.e.*, dearness of gold) so far as it has been caused by diminished supply of, and increased demand for, gold itself. This is what has been called by Professor Lexis *specific* appreciation of gold.

3039. But still if we hold that silver has not altered as regards commodities, and we know the exact change that gold has undergone in relation to silver within a small fraction, we arrive at the amount by which gold has risen in relation to commodities?—Not quite so. What I say is that silver has not altered in relation to commodities in silver-using countries. It does not at all follow from that that commodities in use or purchaseable here with gold may have maintained a proportionate relation to gold. It would follow, I suppose, all things being alike, that the

relation between gold and indigo and silver and indigo would retain a certain proportion.

3040. However, we may assume that the evils that result in your opinion to the commerce of England and the world from the divergence in the relative value of gold and silver are due chiefly to the fact that gold has increased in value, and not to the fact that silver has fallen?—Yes, I think so. I would add one thing, if you please, to what I said about the reason that silver has not fallen in respect of commodities, and that is this, that silver, like every other currency that has depreciated, makes its depreciation felt last of all among the wage-earning class and in the necessaries of life. For example, in a paper-using country where the paper currency has depreciated it will be just the same to the wage-earner. All that he feeds himself and clothes himself with will cost the same as it has cost before, and practically, he will not have perceived the difference, because he buys his rice or whatever it is that he lives upon, and he buys the scanty clothing he wears (provided always that it is not imported clothing or imported material), at the same price for years.

3041. Your view is that there is a species of friction which prevents the wages of labour and the price of necessaries from answering directly as it were to any alteration in the value of the currency?—Yes.

3042. Now could you explain to the Commission the exact mode in which this appreciation of gold injures the trade of this and other countries? Are you of opinion that one of the modes in which it has injured trade is by introducing an additional risk into the transactions between the two countries?—Yes, I am.

3043. That, however, is rather due to the uncertainty of the relation than to the fact that gold has risen in value?—Yes. It is the uncertainty in some cases, it is the rise itself in others, a rise which cannot be calculated upon, whereas all other variations in exchange are calculable. I do not mean correctly calculable, but approximately calculable.

3044. Are you acquainted with the actual mechanism by which transactions are carried on between England and India?—By analogy, but not practically myself. I have very little dealings indeed with India.

3045. It has been stated to us in evidence by one witness at least, that the whole risk can be thrown off the shoulders of the exporter and on to the exchange banks, who provide the actual machinery by which the commerce is carried on?—That would be very kind of the exchange banks if they did really take the risk gratuitously. But they do not take the risk without taking an equivalent for it.

3046. They charge something in the nature of insurance?—Certainly, and the more the risk the more in proportion is the charge, or the more out of proportion is the charge.

3047. Is it not the case that those exchange banks practically only run a risk on the balance of the transactions, that as long as there is an import transaction corresponding to an export transaction there is no risk to the bank, and it is only when the one transaction is not covered by a corresponding transaction in the other direction that they run any risk at all?—The risk seems to me inevitably to rest somewhere. It is quite true that the exchange bank may shift the risk both in the export transaction and in the import transaction, but the person who is concerned with either of those transactions must run the risk, or must pay for being saved from the risk; the risk exists.

3048. But the risk to the particular bank exists according to the theory which I have just stated, only upon the balance?—That is perfectly true. I suppose it is the same as if a bookmaker were laying and taking odds about a certain number of horses in a race; on every bet he would run a risk, and so would those with whom he betted; yet the risk to him would only be on the balance of the transactions. But the risk to any one of his opponents is not extinguished or diminished by the fact of the bookmaker having made himself safe by a series of operations.

3049. But the bank would not have the right to charge, or would be prevented by competition from charging, for more than the actual risk which they undergo; therefore if that risk is confined to the balance of commodities, they would only charge on that balance. If that is trifling, then the insurance will be correspondingly trifling?—That is certainly a most ingenious argument, but I do not think that, practically, it works so. I must say that I have less experience in it than my partners who are on the other side. But as regards the risk which is run, say, in dealings on the West Coast of South America, which is what I am familiar with, it happens that one of my partners is here at this time, and I put to him the general question about the risk of exchange, and he has written a memorandum which I propose to put in. (See Appendix X.)

3050. Is it his opinion that it is a definable and absolute risk that is run?—Yes.

3051. A risk which can be stated in pounds, shillings, and pence?—Yes; only that it is one that varies every day. It can be stated rather in X and Y than in pounds, shillings, and pence.

3052. But it is appreciable?—It is an appreciable and certain risk.

3053. (*Mr. Courtney.*) And do you import and export, or only one?—Both; only one will be the inverse of the other.

3054. (*Mr. Birch.*) What you want to point out is that it is difficult to fix ahead. You can negotiate an operation for the day?—Of course you can; that is the simplest thing in the world, a thing that you can negotiate in half an hour. That is done, but from the beginning of the day to the end it would not be quite certain. Any pair of transactions could, of course, be made to balance one another. There seems to be some idea that exchange is an unimportant factor in the matter. I can only assure the Commissioners, or such of them as have no personal experience, that it is one of the most important in all transactions in foreign produce, that it is and must be continually in the minds of all merchants, and that anyone who should go, say, to Chili, with 50,000*l.* in his pocket, and should take as his guiding principle that he need not trouble himself about exchange, would be, in one respect at least, an agreeable colleague to his neighbours, that his 50,000*l.* would, with more or less speed, pass from his pockets into theirs. Suppose my house in Valparaiso to buy on the 1st of April a cargo of nitrate of soda deliverable on the 1st of September, the purchase must have been calculated on the cost, freight, insurance, and exchange. If at the time of delivery the exchange has risen 1*d.*, the whole operation may become a losing one. You may say he can secure himself by selling bills forward. So he might, if it was the custom of the place, but not always. And the banker who buys the bill from him could, perhaps, secure himself, but that is only transferring the risk, some one must suffer, the risk has to be paid for just as has the risk of a rise in freight, and I think the fluctuations of the former are of more account than those of the latter. I could show what the case has been during the year 1886, as between freight, which everybody would admit is a very great factor, and exchange; and I think I shall show that the fluctuations of exchange have indeed been more important than the fluctuations of freight. But if the risk is considerable under the circumstances as they exist in Chili, much more must it have been when the changes in the value of silver were so rapid and so large. I have admitted that the merchant might secure himself. So he might sometimes in India, but it does not follow that he will or can. I was speaking to an Indian merchant yesterday, and he said that the present exchange in India by telegraph is 1*s.* 5$\frac{3}{4}$*d.* but no bank would secure that for June next at 1*s.* 5$\frac{3}{8}$*d.*, which is a difference of two per cent., so that it may not be really a security at all, but that shows the appreciation that both sides will have of the risk.

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3055. (*Chairman.*) Do I understand that last statement of yours to mean that the bank charges two per cent. as insurance?—In effect, the bank charges two per cent. as insurance.

3056. Against the possible loss by exchange between this and June?—Yes.

3057. (*Mr. Birch.*) But in any other country in the world, if you go to a banker to fix an operation two months hence, you may have to suffer in exchange?—Oh, certainly.

3058. Therefore, it is not a silver country, but any country in the world?—I quite agree. I have spoken here not from any knowledge of the silver-using country, you see, but of a country where there is a paper currency, though based on silver, and I said that much more would one have to suffer in exchange when the changes, which from causes absolutely irrespective of commerce, were taking place, were making silver fall 1*d.* or 1½*d.*, or rise again 1*d.* and 1½*d.* any week. Of course, I am speaking altogether here about the risk in Chili, where the exchange is counted in paper dollars, based upon silver, and, therefore, sympathising with silver, but with other circumstances affecting them which do not in the same way or not in the same degree affect silver, or may not.

3059. (*Chairman.*) I understand that every bank charges for a transaction which is to extend over, say, four months?—Yes.

3060. What we should like to know is the difference in the charge of the bank according as that transaction which goes over four months is with a silver or a gold using country. That would put what we want to know exactly in figures?—I should say that the case was this: that in a gold-using country, from Australia to England, for example, and *vice versâ*, a very small degree of mercantile intelligence will enable the merchant on the one side and the banker on the other to estimate what has been the export and import of the country, and what, seeing (say) the amount of wool that is being brought down, the amount of gold being brought down, and the amount of goods that are coming in, will be the course of exchange in the next four months, but if it is a silver-using country, and you have, in addition to that, the possibility of the United States repealing the Bland Bill, and silver going down all at once to an unknown level; the risk is greater, the insurance for the risk must necessarily be greater, and, therefore, the burden on trade is greater.

3061. I quite understand the nature of the argument. What we want to get at is the degree of injury to trade. Let us suppose that you have two transactions, one with Singapore, which is a silver-using country, and one with Java, which is a country otherwise exactly like Singapore, but a gold-using country. You may go to the bank, and ask them to help you in both transactions; will they ask you more for Singapore than for Java, and, if so, how much more? The reason I chose Java is that one of the witnesses we have had before us explained that Java, which is bi-metallic, has a fixity of exchange with gold-using countries, which Singapore has not?—I imagine that the gain to Java was that it had the same currency, the same money as Holland, and, therefore, it would be regulated really by the exchange between England and Holland, after the arrival of the specie here, but I really know nothing personally about Java. The case seems to be this: It is a mistake to call Java a gold-using country. Its money is the Dutch silver guilder, the standard is bi-metallic, but of what is called the "limping" sort, that is to say, the mint is not at present open for the coinage of silver. In like manner, the money of Pondicherry is the French franc, with the limping bi-metallic standard. In Singapore the standard is silver, the money the Mexican dollar. In India the standard is silver, the money the rupee. If I have business with all these places, and my correspondents make me remittances in specie, for my rupees I shall get 1*s.* 5½*d.* instead of the 1*s.* 10½*d.*, which I should have received in former years; for my dollars 3*s.* 4*d.* instead of 4*s.* 3*d.*; but from Java I shall receive guilders worth 1*s.* 8*d.*, as they were before 1873, and from Pondicherry francs worth 9¾*d.*, as they were before 1873, the full value at the ratio of 15½ to 1. If silver should go down 5*d.* more in the ounce, it would have no direct effect on the remittances from Java and Pondicherry, while those from India and Singapore would be enormously depreciated. Thus, however much Java commerce may suffer from other causes, it has suffered no abnormal loss in exchange, and is free from apprehension of fluctuations in the future which cannot be even approximately calculated. How much more a bank will charge for securing your forward exchange with Singapore than with such a country depends upon the circumstances of the moment and the courage of the banker.

3062. (*Mr. Barbour.*) The question may be put in this way. In dealing with a country that has got the same standard, say, two gold countries dealing with each other, is it generally customary to buy and sell forward?—It is not customary in Australia. It could be done of course; but the banks would think the application strange. The fluctuations in exchange there, except under temporary and very peculiar circumstances, are very small.

3063. (*Mr. Houldsworth.*) I understood you to use the word risk very much in your argument as synonymous with loss. Now, is it not a fact that if you have a risk which results in a loss, the reverse transaction will result in a gain, or might?—If they were synchronous transactions.

3064. So that risk is not synonymous with loss?—I may have been misunderstood. What I mean to say is, that it is burden rather than loss.

3065. But it is not a burden if it results in a gain?—No; but it is a burden to the merchant, who has to pay the bank. The bank may gain but may lose.

3066. All commercial transactions are risks, and the whole basis of commercial transactions is the balance of profit or loss?—Certainly.

3067. And exchange is only another element, and is not all loss. Therefore, an exchange bank or an exporter, or an importer, if he had losses on the one side over exchange, would have gains on the other, and it might turn out at the end of the year that the balance was on the one side or the other?—Yes, I think it might. I think risk is *cost*, rather than *loss*. That is true, but for all that I must insist that the more uncertainty that you have in exchange the heavier the cost, and the less you are able to compensate yourself.

3068. Then you would mean to say, that if cotton was always at one special price, it would be better for trade than it is?—No, I do not. I think it would be a bad thing for dealers in cotton. It would destroy speculation. I think you would carry my argument *ad absurdum* there. I will quote something here from what I wrote long ago. "Suppose a manufacturer to send two consignments of goods—one to Australia and another to Calcutta, telling his correspondents that 30*s.* per piece is a covering price. The Australian has no difficulty at all; he knows the cost of transmission, and will not buy a bill for remittance on less favourable terms for the manufacturer than he could get by sending specie. His only calculation is as to the possible variation of the exchange between the date of his sale and the date of his recovering and remitting the proceeds; and a knowledge of the exports and imports will give him a reasonable clue to the probabilities of rise or fall in the exchange. The Calcutta merchant can also estimate this; but there is another element on which he cannot calculate in the least when he makes his sale. What will be the price of silver when he comes to buy his bill? Silver is to his English friend a mere commodity, and his remittance to him is in its essence a shipment of that commodity, and on the fluctuations of its price he cannot calculate at all. But, 'what then?' it may be answered; 'These are

" ' only the natural risks of trade. Is our currency " ' to be revolutionised because a manufacturer has " ' made a loss ? ' I answer that this is an extra " risk, which should and could be avoided; but the " particular loss to the shipper is not the measure of " the evil; for the risk forces him to suspend or " curtail his shipments to the country, whereby both " he and his correspondent in Calcutta suffer; he " curtails his manufacture accordingly, whereby large " classes in England suffer, and trade is injured all " round."

3069. (*Chairman.*) I now come to a point on which we have had a great many theories advanced by various witnesses, namely, the extent to which trade is disturbed by an unnatural stimulus to production being given to silver-using countries corresponding with what, I suppose, we must regard as unnatural depression in gold-using countries. Could you explain to the Commission your view of how that result takes place?—I am willing to agree that the import trade into England has not been unnaturally stimulated by the fall in exchange; but if it is denied that it is stimulated, I must say that such stimulus is the most natural thing in the world, and certainly exists. I do not know if the Commission has had before it any witness, himself engaged in production in a country having a depreciated currency; but I assert that no figures, however marshalled, and no theory, however specious, can controvert facts which are seen and known every day by all those engaged in production in such a country. It has been said that Mr. Bagehot never countenanced such a notion. Mr. Bagehot was a man of great ability, and his opinions are always interesting, even on subjects of which he had no personal knowledge; but I may assure the Commission that my partners, who are manufacturers and merchants in Chili, where the currency is depreciated, as well as every one of their neighbours who have practical knowledge of the subject, would look on this question with the same astonishment as if it had been asked whether Mr. Bagehot countenanced the notion that the three angles of a triangle were equal to two right angles, or that any two sides of a triangle were greater than the third. I shall be exceedingly surprised if any intelligent person, with the like experience, will dispute the general statement that a depreciated coinage decreases the initial cost, and stimulates the production of commodities intended for export. So much has it done so, that I may safely say, that if the exchange should rise from its present point of 25*d.* to the dollar to somewhere between 36*d.* and 40*d.*, not another quarter of wheat would be grown in Chile for export; many copper mines, which subsist on the low exchange, would be closed, and many nitrate establishments would be in the same case.

3070. Do I understand, then, that the mode in which this stimulus acts is by the diminution of the initial cost of manufacture in the country where the currency is depreciated?—Precisely.

3071. Will you explain how that depreciation in the initial cost of manufacture has taken place?—The wages and all necessaries of life remain nearly as they were, that is to say, that the dollar being now worth 2*s.* 1*d.*, we pay the same (in meat or in money) as we did when it was 3*s.* 4*d.* to 3*s.* 6*d.* Consequently, the initial cost of a quintal of nitrate is still but a little over two dollars, and is drawn for at, say, 4*s.* 2*d.* instead of 6*s.* 8*d.*, so that there will be 2*s.* 6*d.* less to deduct from the gross proceeds, whatever they may be. If the rise in the value of gold were exactly in accordance with the fall in the exchange, and if it exactly synchronised with that fall, this gain of 2*s.* 6*d.* would simply serve as a protection to the producer in the country of depreciated currency, or, I should rather say, a *bonus*, giving him a compensation for the fall in price in the gold country, which protection other producers would not have. But as a matter of fact, they are not synchronous. The depreciation of the currency may be the work of an hour; but the rise in the value of gold depends upon an increased demand for it as money, or a diminished production, both of which need a long time before their effects are felt throughout the mass existing in the world. I have not indeed been in Chili myself, but I have the irrefragable evidence of my profit and loss account, and I find it a very satisfactory witness.

3072. Your theory, as I understand it, is that if the fall in the exchange was exactly synchronous and equivalent to the fall in gold prices, then there would be no stimulus given to the production in the silver-using country beyond what you have described as protection. Will you tell us how there is protection conferred upon the producer in silver-using countries?—That would be rather a matter of figures. That again I would rather set out afterwards. It would be easy to give a concrete transaction. [*See* Appendix X. (2)].

3073. Does the protection you speak of mean that the producer in the silver-using countries gets a bigger profit than the producer in gold-using countries?—He gets the same profit as he did before. That is what I take it to be. He would then get the same profit that he did when the dollar was 4*s.* 6*d.* or 4*s.*, or whatever it might be. The profit that he then got, and the profit that he now gets, would be the same; whereas, the fall in the gold price of silver not being synchronous with the fall in the gold price of commodities here, the fact is that he comes in, not indeed for the higher gold price, but for a less diminished price in gold. One might say that this was the case. The value of nitrate of soda is now 10*s.*, and it was 12*s.* 6*d.* before. To cancel the 2*s.* 6*d.* gain mentioned in the last question but one it ought to be lower; and in the course of time it would be lower and the 2*s.* 6*d.* gain would vanish. Things would accommodate themselves ultimately, but they have taken seven years to do it in, and they have not quite done it yet.

3074. (*Mr. Birch.*) That means to say that the whole of the fall in the price proceeds from the appreciation of gold?—Yes, of course other things being equal.

3075. (*Chairman.*) Your view is, that the producer in the gold-using country is at a disadvantage, because he gets less price for his commodities as gold appreciates, but has to pay wages, if not exactly on the old level, at all events more on the old level than the price of gold would justify; in other words, because wages do not immediately follow the fall of the prices of the commodities which he produces?—No, I think I would put it the other way, that the man in the silver-using country paying now 4*s.* 2*d.* for the cost of manufacture of his nitrate instead of 6*s.* 8*d.* is at an advantage over the man who pays indeed, perhaps, the same wage in a gold-using country, or no great difference, but pays a substance that has appreciated *pari passu* with the range of prices in the country to which the import is made, or to which the export is directed.

3076. Do you think the advantage given to the producer in the silver-using country, as compared with that in the gold-using country, is due to what I may call the mechanism of exchange, or is it due to the fact, which you have pointed out to the Commission before, that wages do not follow so quickly as other commodities the alteration of the value of the standard?—It has nothing to do with the mechanism of exchange, so far as I understand what you mean by that. It is due to the fact that the wages and the necessaries of life do not follow so rapidly as other things, the fall or rise in the exchange, *i.e.* the fall or rise of the value of that which is paid for them; but in a gold-using country it must be that though they keep where they were, they must, of necessity, inasmuch as they are paid in gold, bear a relation to the gold prices at home.

3077. Then, in your view, the advantage to the producer in silver-using countries is simply that he pays less wages?—Less gold wages.

3078. Not less real wages, or, at all events, not more real wages?—Less gold wages. I mean that the deduction from the gross price of the commodity

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in the country to which it is exported has to be less, because he has only to draw for a certain number of pence instead of a greater number of pence, paying the same wages in the coin of the country, or in the food and clothing which he buys with the coin of the country, than he did before.

3079. While the manufacturer in the gold-using country is practically paying more wages, though nominally he may perhaps be only paying the same, so it resolves itself into a question of wages, not really a question of exchange?—That is a question of wages, not a question of exchange, though it is represented by exchange.

3080. Let us consider the case of a silver-using country which is isolated, and not trading with a gold-using country at all. There, if the currency depreciates, the manufacturers are stimulated?—Yes.

3081. And, similarly, taking the case of a gold-using country not trading with a silver-using country, there, if the currency appreciates, manufacturers are depressed?—Yes.

3082. And it does not really add to our knowledge of this phenomenon to bring in the question of trade between a silver-using country and a gold-using country. The phenomenon itself is wholly independent of the fact that the two countries have different metals for currency; it is, in fact, a question of wages, and not a question of exchange?—No, it is a question of wages, and not a question of what you call the mechanism of exchange, namely, the way in which the thing is drawn for by bill or otherwise. That is so; but it is a question of wages affected by the varied and varying value of the measures of value in the two countries. Such a thing would not happen, of course, if in Chili gold was the currency or notes based upon gold, except so far as notes based upon gold may be over issued.

3083. Then, it is due to the fact, as I said before, that wages feel the effect of appreciation or depreciation of price more slowly than other commodities?—You must say wages, and the cost of the necessaries of life.

3084. What evidence have you for the fact that wages and necessaries feel more slowly a change in the value of a currency than other commodities?—The fact is, that it is so in Chili. Also, I understand that it is the same in other countries. I am told that it is the same in this country. The converse of it is true in this country, because, admitting the appreciation of gold, wages have not fallen in proportion.

3085. (*Mr. Courtney.*) But I think there are some more points to be regarded in that problem. Just consider the case of Australia, at the time of the gold discoveries there, when gold became at once greatly depreciated. What was primarily affected there?—An enormous rise of wages. I quite admit that, but that is an exception to the rule, which was obvious because the necessity of the case made it so. There was a very small number of wage earners in proportion to those who were willing to be served, in proportion to the demand for service. The consequence was that a man said to himself: "I can go to "the diggings and get so much a day. If you want me "to black your boots you must pay the same." That is not the same as a regular trade going on. The whole thing was varied by that strange and unwonted phenomenon, the discovery of the gold.

3086. Does not that involve a modification of your theory?—I hardly think it does; because, I think, in all other similar cases of which I speak, the same would happen, and in all other similar cases to that of which you speak, the exception to the rule, if I may use such a word, would occur.

3087. But does it not amount to this, that where the depreciation of the standard is due to a greater production of the metal of which the standard is composed in the country itself, there wages and necessaries are the first things to feel it. Supposing, in England, for example, silver or gold were depreciated through a production in England itself, you would find in England itself that wages and necessaries would be the first to feel it?—It seems to me that there is a great deal in that way of putting it. Your wage-earner would be off to dig his wages out of the ground, unless you could induce him to stay by giving him higher wages out of your pocket.

3088. Your theory only holds where the depreciation arises from changes in the production of the metal elsewhere than in the country, which are felt in another country through trade?—I think I will put it in another way, which, perhaps, would rather confirm what you say. The wage paid in Australia was the very thing that was the produce of Australia, and the very thing that was disturbed in it. The man said: "By going to the diggings I can get wage, that is I "can get the gold." That is not at all the case with the man in Chili; for example, supposing there had been a great over-issue of notes, which, I suppose, has been the case, owing to the war in 1879; the man who is earning wages could not by his work *produce* so many notes a week, while the man who went to the diggings could procure himself gold. I think there is a very great difference.

3089. I think you would find it desirable to re-state your theory, though with that modification?—I should still say mine is the general theory, and Mr. Courtney's an extraordinary exception. In the case you suggest the general theory is varied because the material substance of which the wages are composed is the very same substance which the labour of the wage earner produces.

3090. (*Mr. Birch.*) Do I understand you to say that the increase of the currency would not affect wages?—Certainly it would in time.

3091. In Chili it has affected them, surely?—That is the very point. It has hardly affected them the least in the world. The effect has been trifling.

3092. (*Chairman.*) You have now explained to us broadly your view of the mode in which trade in the silver-using countries is stimulated, and also you have explained to us one of the causes why trade in a gold-using country like the United Kingdom is depressed, that cause being the fact that wages, though nominally the same, have in reality risen. Are there any other evils which, in your opinion, arise from the appreciation of gold in a gold-using country?—I think, generally, that a period of appreciation of the measure of value, that is to say, a period of falling prices, is unfavourable to trade, while a period of higher and somewhat increasing prices is favourable to trade. One reason, perhaps it is a sentimental reason, is that the man who finds that prices are increasing is more disposed, more inclined, to enter into business than the man who finds that his last transaction was destroyed by a falling price, and the present transaction seems likely to be destroyed in the same way.

3093. In other words, it promotes enterprise?—It promotes enterprise. If it is too great, as I have seen plentifully in the history of the trade of this country, it promotes rash speculation, but otherwise it promotes enterprise, and I should add that it is evident to me why a low range of prices is less favourable to trade than a higher range of prices, and that is, that the margin of profit is greater on a high range of prices than on a low range.

3094. But you do not mean to assert, do you, that profits are greater with a plentiful currency than with a scarce currency?—I do not say that of necessity, but I say that profits are greater where you have an improving trade and higher prices.

3095. It is the actual change from a lower to a higher level which produces it?—Certainly; and there may be a change from a higher to a lower level without any such affection of the measure of value.

3096. (*Mr. Houldsworth.*) Do you mean that there is a possibility of a greater profit at a higher range of prices than a lower? I thought you meant the possibility of a larger margin at a higher rate of price than a lower?—Yes, I think it is. I have such an impression on my mind.

3097. (*Chairman.*) But you do not mean us to understand that if gold, we will say, fell a half in value, the actual profits of production, after it had fallen and become fixed at the lower point, would be greater?—No, I do not mean that. What I mean is, that the variation is bad, and the variation in a downward sense is worse for trade than the variation in an upward sense. When you have once got down to the point, and all previous contracts are completed, the thing is pretty much what it was.

3098. Then you have now enumerated two causes why the appreciation of gold has injured the internal trade of England, one depending on the rate of wages, the other depending on the spirit of enterprise, or the reverse, which a fall in the value of the currency produces. Are there any other causes which you would like to call our attention to?—I do not think the matter is quite exhausted. I see increased competition with home industry in certain industries which have been fostered in silver-using countries, and I see much uncertainty in entering into contracts, in these countries, from which one has a prospect of future profits. I must also take into account all investments of money in foreign countries.

3099. But have you anything that you would like to lay before us beyond the general view that it is an injury to manufacturers to find the actual burden of their debts increasing while the nominal amount of them remains the same?—Certainly. Suppose a man has borrowed money to build his mills, for example, he has to pay the same interest continually; but this interest is an appreciating interest, and his profits do not appreciate at all, but quite the reverse.

3100. But you have no special facts to lay before us in support of that general proposition?—No, I do not think I have.

3101. Have you any facts to which you would like to call our attention with regard to the effect produced by the variations in the relative values of the two standards upon the investment of capital in silver-using countries?—Certainly; there is a great deal to be said upon that point.

3102. Is there any other consideration which you would like to lay before the Commission with regard to this part of your examination, which deals merely with the existing evils?—The apprehension of great changes in the future value of investments of capital in silver-using countries, such changes, I mean, as would be produced by a further fall of silver.

3103. To put it shortly, the reason why, in your opinion, the investment of capital in silver-using countries has diminished is the extreme uncertainty the investor feels as regards the return for his investment?—The interest and principal.

3104. (*Mr. Cohen.*) Do you consider the low prices current in countries using the gold standard an advantage or an evil?—I consider low prices, and especially falling prices, an evil in their effect on trade. For the consumer, of course, they are good, if and when the low prices reach him. They are a good to him in themselves, but may be an evil to him on balance, inasmuch as the injury to trade tends to hurt him as well as other people, and he may not have the wherewithal to pay even for the diminished cost of the commodities.

3105. Are they worse than an additional fluctuation and oscillation from one range of prices to another? Disturbing all the relations of trade, and preventing the merchant from calculating, because he has another element to take in besides that of his own goods, what the range of movement will be?—Yes, I think so.

3106. You spoke also just now of the protection which a trader could obtain by buying bills forward; was there not a time during the past year when silver went down to 42*d.*, and it was almost impossible to sell bills upon India at all?—I know so little about India. I should hardly think it would be impossible to sell bills. I suppose one could always sell bills; but it might be very difficult to sell bills forward for fear of the fluctuations of exchange. You could sell a bill to-day, of course, but you could not say that you could sell a bill to be delivered at such a day in June.

3107. If that state of things happened, of course the merchant would not be able to cover himself against his transactions in goods?—That is so.

3108. He would therefore have to speculate himself?—He runs the risk himself.

3109. What would be the effect upon trade if the United States Government were to cease to coin dollars under the Bland Act?—I should say it is absolutely incalculable. If the dangers of the present condition are what I think them to have been, and if this Commission comes out infructuous, and if the United States suspend the Bland Act, and, more particularly, if they throw their silver upon the market, silver rupees may go down to one half, the dollar may go down to 2*s.*, and I think all the evils of which I have spoken will be aggravated.

3110. And I suppose all those effects will be accentuated, supposing any one Government holding large stocks of silver threw it on the market?—I suppose if one Government does, the chances are that the others will follow through the same gap.

3111. Supposing the effect were to be what you say, and the rupee were to go down to 1*s.*, would you apprehend commercial disaster in the East, and a still greater fall in prices in countries using the gold standard?—Well, it is so difficult to be a prophet; but I should rather be inclined to think that such a fall would be hurtful, because, in my opinion, if the fall that has taken place is hurtful now, you may call it commercial disaster. For example, in foreign countries the disadvantage is great to the merchant who has invested sterling in Lima or in India. If the dollar or the rupee falls 50 per cent. in gold value the natural result is that those people who have made such investments say to themselves, "Let us get our money back as fast as we can," and if they proceed to do so there is a struggle between every one of them to be first, and down goes the exchange. I remember a man, who had sterling in Peru which had cost him, I suppose, 3*s.* 6*d.* a dollar, came to me in great trouble, and said, "The exchange from Peru is 1*s.* 6*d.*; what shall I do?" "Get your money home." "I do not like to at this low rate;" so he waited till it was 3*d.* That is what would naturally be the case, because a great many people had come to the same point themselves; they wanted to get their money home.

3112. If that movement took place, there would be a corresponding fall, of course, in the price of commodities in gold-using countries, to some extent, at any rate?—I think there would be. One cannot gauge to what extent it would go.

3113. Do not you think it would be a great evil that the trade of the world should be at the mercy of any one country by producing such an effect?—Yes, I think it is an exceedingly great evil, and that is why I say it would be desirable to make an arrangement with other nations to diminish or abolish that evil.

3114. (*Sir T. Farrer.*) I wanted to ask you if you had thought at all to what extent Council bills compete with silver?—Bills always compete with silver; that is to say, the natural course of trade is that one pays for commodities sent from one side of the world to another, by bills. If there are not enough bills, then you send specie; if there are enough bills, you do not send specie.

3115. A Council bill or a telegraphic transfer is an order for the payment of silver in India?—Yes.

3116. But supposing silver to be of more value as compared with commodities in London than in Calcutta, silver would go to India, Council bills or no Council bills, would it not?—That is one of the things one cannot answer, because nobody knows whether anybody chooses to send silver. Certainly, if there were no telegraphic communication, and the people of India, creditors and merchants alike, were fools, such a thing might happen. If one could buy a pound of tea in India for one half the money you

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could buy it for here, the people in England and India would know that directly, and telegraphic orders would level it instantly. You would not have to send silver to do it, because it would not be done, the people of India would not sell their tea at that price, and the people of England would give more. There is such a solidarity between England and India, and between every part of the world, that prices level themselves.

3117. You mean that prices would rise there directly?—Directly, without sending any silver. The fact of the possibility of sending any silver seems to me would be enough.

3118. But silver is constantly going to India, is it not?—Yes, the balance of trade will send silver to India, and, what is another thing besides the balance of trade, the delight the people have to make anklets, and hoard the metal.

3119. So that there is a demand for silver in India?—No doubt.

3120. And silver would go like any other commodity if its value was greater in India than here?—No, I do not think it would; because those values would be levelled until they were brought to an ordinary mercantile risk, and then the whole thing would be governed by the balance of indebtedness.

3121. (*Mr. Birch.*) It might be sent for investment, or for payment of produce purchased?—That is so.

3122. (*Mr. Courtney.*) But would it be the case that there would be a flow out of silver from here; the value of the debt in silver would rise in India and would diminish here, even if the level ultimately came to be the same, a movement on both sides, brought about by a movement of the metal?—I do not think so. What is the case in Chili must be the case in India. The price of copper in Chili and in England are as near as the telegraph will enable it to be on a level. Almost all produce has come to be an exchange operation, because of the action of the electric telegraph and the rapid communication by steam. In former times, I think, perhaps it would have been so, that people would hear that there was such and such a stock in India, and that you could buy whatever it might be at a very low price, and they would buy it up or endeavour to buy it up, but I do not think that is the way in which things operate now, and I do not think it can while everybody knows everything about what is passing in each market.

3123. (*Sir T. Farrer.*) Then you think that the fact that silver becomes abundant in the London market would at once raise prices in India, without any transfer either of silver or of commodities?—Of those commodities which are common to England and India, that is to say, the commodities that are usable here and are usable for export from India to England, but the abundance of silver is not so very large as to affect it. Silver is a commodity here, and you might send it away, but there it is money, and it can only be sent either as an investment into India or in payment of balance, or possibly in payment of a particular purchase.

3124. If silver is not sent to India at all, how can it raise prices there?—Because it can be sent; I think that is sufficient to raise the price.

3125. Without its going there, or increasing the currency at all?—It would not increase the currency if it did not go.

3126. So that, being here, it would increase the price in India?—I think you are beginning with a thing that would not happen. You are beginning with a supposition of a price in England differing largely from the price in India, that is in things of constant import. I do not think it would happen at all.

3127. (*Chairman.*) Is it not that any possibility of wide divergence is stopped by the fact that the smallest beginning of divergence of price produces a small flow, one way or another, enough to counteract it?—Yes, that is my meaning; what would really happen would be this: The movement would be in the commodity, not necessarily in the silver. Tea being dear here, and cheap in India, would be shipped to England; the price would fall here, and rise there, till a level was reached. If the imports turned, or seemed likely to turn, the balance of indebtedness against England, silver would flow into India.

3128. (*Mr. Birch.*) It goes there, and if coined increases the currency of the country just the same as gold here?—Yes.

3129. (*Mr. Barbour.*) Let us assume that a man has got silver in London; he would naturally wish to sell it to the best advantage, and if circumstances are such that he can make more by sending it to India than by selling it to anybody elsewhere he will send it to India?—Certainly. The real answer is, that I do not think the hypothesis of a very great difference of price is a possible one.

3130. (*Sir T. Farrer.*) I gathered, on the whole, that your view is this: you first of all said that exchange was a very real thing, and then you said that the real stimulus that it gave to foreign production was owing to its effect upon wages in the two countries; but I want to ask whether the appreciation of gold, from which the fall in exchange arises, does not take place in gold-using countries, and whether, therefore, the fall in exchange must not follow the appreciation of gold?—I think the fall in the gold price of silver is identical with the fall of Indian exchange.

3131. I was talking of a general fall. I suppose you to assume a general appreciation of gold against both silver and commodities?—Yes, they would differ. They are neither simultaneous, I think, nor corresponding. That is to say, that you may have a fall of 20 per cent. in silver, and you might only have a fall in commodities of 15, but it would be gradually approximating.

3132. And, I suppose, during that period of approximation there might be a real difference in the trade until the prices were adjusted?—Yes, certainly.

3133. (*Mr. Birch.*) But the change also would be affected by the price of commodities over there?—Surely. That is the very thing that I was speaking of before, the price, the cost of production.

3134. (*Mr. Barbour.*) Have you noticed in actual experience whether the rate of exchange alters first, and then prices adjust themselves on one side or the other, or that prices alter and afterwards the rate of exchange is adjusted?—I think the rate of exchange is the immediate manifestation, and the fall of prices comes after that.

3135. (*Chairman.*) Is it not a fact that an alteration in the rate of exchange may arise from a temporary demand for bills?—Certainly; but I spoke only of the alteration in the rate of exchange arising from the divergence of the precious metals.

3136. Is not one of the difficulties of this question the fact that the exchange may represent a great number of different factors?—Yes, and does represent an enormous quantity; and, moreover, I may say that it is quite impossible for any one to gauge the exact proportion that belongs to any one factor.

3137. So that a single fall or rise in exchange may represent a great number of different factors?—Certainly.

3138. (*Sir T. Farrer.*) I think you said that this stimulation of production in silver using countries was due entirely to the effect produced on wages?—Wages and necessaries of life.

3139. Then you would not at all agree with persons who, like Mr. Manning, take the difference between the aggregate fall in the gold value of silver, which has taken place during the last 10 or 15 years, as a measure of the advantage given to silver-using producers over gold-using producers?—Except that it has always had the effect of stimulating the production in those countries. I think from the very beginning of the fall in silver that has happened, that the production in silver-using countries as compared

with the production in gold-using countries has been stimulated, and one might naturally have expected that they would come very soon to a level. But if I may take Chili, where a depreciation of the currency has taken place, it has taken its present condition only since the war, which is some seven years ago, and there has been hardly any appreciation in the cost of the necessaries of life. In the case of nitrate of soda, I know every single item of the manufacture; the wages and everything else have remained nearly the same.

3140. Do you think that the depreciation of the currency is the measure or nearly the measure of the advantage which the silver producer has?—No, I cannot say. It is a measure, but only in this way, that he does not get the whole amount that it would give him inasmuch as the gold prices have fallen.

3141. (*Chairman.*) Is not the answer to Sir T. Farrer's question that the advantage is a varying advantage. The longer the difference between the two metals exists, the less the advantage;—Yes, quite so; but the movement is very slow.

3142. (*Mr. Barbour.*) If silver falls 20 per cent. relatively to gold, you do not consider that a 20 per cent. bonus is thereby given on exports from the silver-using country?—No, I should be very glad, being a producer in a silver-using country, if it could be proved to be so.

3143. (*Sir T. Farrer.*) Can you suggest any line of statistical inquiry which would enable us to ascertain whether silver-using countries have really been benefited; whether their export trade has been really benefited in the way that you suggest?—I say that my profit and loss account is the only one that I can judge by, and I find that has decidedly benefited, benefited me as a producer in one way, while I have suffered in another, carrying off a loss every year to the debit of exchange account; but happily the benefit to the producer has been greater than the loss to the merchant, I should say than the loss to the capital account.

3144. Now that this fall of exchange has been going on so long, ought not the statistics of import and export in some way or other to show the advantage which silver-using producers have had, or, if not, does it not show that this factor is not so important as it has been made out to be?—It diminishes the advantage to the exporter from this country to the other, but, of course, if imports have taken place, exports must take place. If you buy a penny roll you must pay a penny. The mere amount of the exports, as compared with the imports, seems to me fallacious, because you have to show whether the exports are sent with profit to the people of this country or not. They might be the last despairing stroke of an unfortunate manufacturer, who has lost already 90 per cent. and who is now losing his last 10.

3145. But at any rate you would see it, would you not, in the competition which silver-using countries carry on with gold-using countries?—Where they produce the same thing.

3146. I want to ask you a few questions about investments in silver-using countries. First, with regard to the theory. Investment may be either for a fixed rate of interest, as a debenture, or for undetermined profit, as a railway share, a factory, or a tea plantation, or a mine?—Certainly.

3147. Let us take the latter first, undetermined profit. If I invest 1,000*l.* in a tea plantation, I look to the quantity of tea produced, the cost of production and transit, and the real price of tea, that is the quantity of other goods against which it will exchange, as my source of profit?—Certainly.

3148. When I invest my 1,000*l.* tea is produced and sells so as to give me for a chest of tea of a certain size 1,000 rupees, and this, converted into gold, at, say, 2*s.* = 1 rupee, gives me 100*l.* profit, does it not?—Certainly.

3149. Now suppose silver to fall in value, say, 10 per cent., as compared both with gold and commodities, shall I not get 1,100 rupees for the same chest of tea?—Yes, if silver falls 10 per cent. in purchasing power, certainly.

3150. And with this 1,100 rupees, shall I not buy 100*l.* in gold as before?—Yes, the fall of silver being 10 per cent. you still get 100*l.*

3151. Well, now let us take the other alternative, and say gold rises in value 10 per cent.; then I shall still get 1,000 rupees for my chest of tea, and this 1,000 rupees will only buy 90*l.* in gold?—Yes, I think that is right.

3152. But will not this 90*l.* be, *ex hypothesi*, equal to the previous 100*l.*?—Yes, *ex hypothesi*.

3153. In this case, therefore, the only loss that I suffer from alteration in exchange is such loss as may be incurred before prices are adjusted. Otherwise I am exactly in the same position, notwithstanding any fall in exchange. That is the case for an investment for undetermined profit?—I think so.

3154. Now let us take the case of investments at a fixed rate of interest. The fixed rate of interest may be either in gold or in silver. First, let us suppose it to be in gold. I invest my 1,000*l.* in a debenture at 10 per cent., when the exchange is, say, 1 rupee = 2*s.*; and I get from my debtor therefore 100*l.*, for which he pays 1,000 rupees?—Yes.

3155. Now let us suppose that silver depreciates 10 per cent., that there is a superabundance of silver; I still get my 100*l.* interest as before, but my debtor has to spend 1,100 rupees to buy it. On the hypothesis that silver has fallen relatively to commodities, including the commodities he produces, will not silver prices rise?—Yes, if the fall in commodities is the same as the fall in silver, the fall as between silver and commodities is the same as the fall as between silver and gold.

3156. For the same goods for which he formerly received 1,000 rupees, will he not now receive 1,100 rupees, and with this he will, without any additional burden to himself, pay me my 100*l.*?—Yes.

3157. Well, now let us suppose with this fixed rate of interest, that gold rises in value 10 per cent. by reason of a scarcity of gold?—Every commodity in the same proportion.

3158. In this case the debtor will get no more silver for his goods than before; it will still be 1,000 rupees, but he will have to pay 1,100 rupees for the 100*l.* in gold which he has to pay me?—Yes.

3159. But supposing that gold rises in nominal value, not by reason of the scarcity of gold, but by reason of the increased production at reduced cost of the articles against which gold is exchanged, including the articles which my debtor produces. In that case, if he has to pay more silver to buy my 100*l.* in gold, he will have more commodities to sell, and, *pro tanto*, he has no additional burden to bear, though I am benefited?—That seems to involve such an enormous number of considerations. Treating all the producers of a district as one man, and eliminating competition, what happens is, that, given a reduced cost of production of the articles exchanged against gold, they will be cheaper in gold price, and the more they are produced the cheaper they will be, and the more the producer has to give away to provide the 100*l.*, or the more he has to give away to buy whatever silver may be necessary to buy that gold. It is assumed that his excess of production will exactly compensate him for the excess which he has to deliver. I cannot but think this particular part of the investigation wholly useless, except as a kind of laboratory experiment, because it depends upon two wholly unknown factors: the equality in time and quantity of the fall of silver in terms of gold and of other commodities.

3160. Now let us take the case of investments with fixed interest in silver. I lend 1,000*l.* for a fixed interest of 1,000 rupees, which, at 2*s.* the rupee, gives me 100*l.*?—Yes.

3161. Now let silver fall 10 per cent. My 1,000 rupees will now only buy 90*l.*, and, as gold remains constant, I lose 10*l.*, whilst my debtor is not affected?—Yes.

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3162. Now let gold rise 10 per cent. in value, my debtor is unaffected, whilst I can buy only 90*l.* with my 1,000 rupees. But that 90*l.* will, *ex hypothesi*, be worth as much as 100*l.* before?—Supposing prices to be adjusted. As matter of fact, they never are.

3163. Consequently, with fixed interest there are two cases in which contracts are affected. If the interest is paid in gold, and gold rises in value from its own scarcity, silver remaining constant, the debtor has to pay more. If the interest is paid in silver, and silver falls, gold remaining constant, the creditor receives less?—That is really a summary of what we have said before.

3164. Therefore, on the whole, looking to theory, and supposing prices to be adjusted, the effect of a a fall in silver or a rise in gold, on gold investments in silver-using countries will be as follows. Where the investment is for undetermined profit, it will not be affected by the fall in exchange, whilst, if it is for a fixed rate of interest, the fall in exchange will, in the specific cases I have mentioned, injure the debtor in one case and the creditor in another. To what extent does your experience lead you to think that apprehensions of such losses have prevented investments?—Certainly they do. Of my own knowledge I can tell you an instance, if you like, not precisely of my own business, but one where a very favourable contract was offered by a foreign country for the carrying out of an important work, and it was impossible to venture upon it because of the apprehension of the fall in exchange.

3165. Was that an investment for fixed interest to be paid in silver?—Profit.

3166. Undetermined profit?—Both, because there were debentures supposed. That does not matter, because in either case you see it is profit as regards the operation itself, though not as regards the person entering on it. I mean as regards the operation itself. You have to make up your debentures out of the profit of the transaction. The payment for work done was very handsome payment, but the house concerned said:—"No, we do not dare. Give "us a sterling contract, and we are quite satisfied." "No, no," was the answer, "we will not do that; "we give you even better terms; but we do not dare "to do it."

3167. (*Mr. Courtney.*) Was that in a silver-using country?—Yes; the business was carried on in some measure, because it was already begun and in progress, and the Company was between the sword and the wall. They must either risk having to abandon at much loss, or go on little by little; but neither did they dare to carry out in full the silver contract, nor did the authorities dare to give a gold one. The company went on bit by bit, not putting new money into it, but investing in it the accruing profits, which they could not bring home without loss.

3168. But they would not commit themselves to a larger venture?—Yes; that is so. I cannot say of my own knowledge, but I suppose had it not been for the difference in the price of silver there ought to have been very large additions to the railway network in India, but who will dare to do it? The Government indeed dare at this moment, because I think the Rothschilds are bringing out one at 4 per cent., but how few new railways there are, no doubt in consequence of the present state of things! The Government find they have to guarantee some, but it is for political reasons, and they do it, loss or no loss.

3169. Has there been greater difficulty in procuring investments in Indian railways since the fall in silver began?—I do not know, but I understand it is so.

3170. (*Mr. Barbour.*) There is a Government guarantee in the case of Indian railways, and it is always in gold, with the single exception of one railway which was made some years ago by a private company at its own risk?—The risk there is on the Government. There is China, that has hitherto not had railways; but they say that the Chinese are willing to have railways now, but where will you find the English enterpriser who will put his money into China to be paid in silver?

3171. (*Mr. Chamberlain.*) You do not know, as a fact, that the Chinese are willing to have railways?—No. But if it were so, as is said, I say no English enterpriser would be willing to invest millions in that country.

3172. Not on a silver basis; but I do not understand why they could not have done it on a gold basis?—There would, I suppose, have been no difficulty then, because the risk would be borne by the Government.

3173. That would not matter to them, because they would buy everything on the gold basis. As regards a new contract, it does not matter in the least. They buy their iron, and every part of their materials for the line, at the present depreciated price in gold. That being so, it does not matter to them?—Of course, if it is equal, and not varying at all. That involves a question of future fulfilment of contract. If it were in silver, there might be a very great difference in the value of the silver that they would receive. If they are to be paid in gold, it is all very well; the English people would like it very well, if they are paid in gold, but the ultimate risk of providing that gold would rest with the Chinese Government, supposing it was the Chinese Government.

3174. (*Sir T. Farrer.*) Have there not been considerable investments in India in tea plantations and otherwise?—Yes, but I think that they have not been very happy ones.

3175. They would not be affected by the fall in silver?—They would get the benefit of the lowness of wage.

3176. And they would depend on the quantity of tea that they produced, and not upon the relation of gold to silver, would they not?—They would depend upon the quantity of tea produced, and upon the appreciation of gold.

3177. They would have the advantage that you have stated that belongs to silver-using countries?—Of course they would.

3178. Do you know whether, since the fall in exchange, that is, since 1870, investments in silver-using countries have been less frequent than before?—No, I cannot say.

3179. (*Mr. Courtney.*) I should like to know a little more about your experience in South America. With what countries?—Chili now; Peru in former times. Formerly, both in Peru and Chili, now in Chili. Happily, we got our capital out of the Peruvian business before the fall took place, to such an extent, at least.

3180. Chili is a silver-using country?—It is on the basis of silver; it is, in fact, a paper currency, since the war with Peru, which was about seven years ago.

3181. Since then it has been a depreciated paper currency?—That is what it has been. It would have been very much more so, only the result of the war was the taking of a considerable amount of territory and population, which therefore absorbed a great deal of the paper money.

3182. What is the average premium on paper?—It is reckoned in the number of pence to the dollar. I have known the dollar, I think, at 45*d.* in former times. That is about the par value there. It is now 25*d.* or 26*d.*, but that has not been the difference that has resulted since this depreciation.

3183. That makes 45 per cent. depreciation?—Yes, but that has not taken place in this time, you know.

3184. No, but that is the fact with which we are starting?—Yes.

3185. Do you think that the reasoning which applies to a country really using silver is applicable in the same terms to a country which has a depreciated paper nominally resting on silver?—Yes, I think so. Not precisely the same, but the same sort of reasoning would; and you must bear in mind that the holders and users of these paper dollars have always in mind

the probability and the possibility of the redemption, and of a return to specie payments.

3186. You are a producer in Chili?—Yes, and a merchant also.

3187. You employ labour there to extract this nitrate of soda, which you send home?—Yes, which we perhaps send home, or we sell on the spot. The proper thing for a manufacturer to do is not to send it home; he makes himself a merchant if he does that.

3188. Without investigating too closely the method of your trade, can you explain to us how, in the course of your trade, you have made those gains to which you have referred?—Whereas I used to pay 3*s.* 6*d.*, we will say, or whatever it may be, for the labour, I cannot tell you the sum that I have paid, because I do not manage it myself, or know anything except what my accounts show of the management, but I now pay, say, 2*s.* 1*d.* for the cost of the labour instead of 3*s.* 6*d.*, or whatever it might be; therefore I have less to deduct from the gross proceeds when they come home, so, to those who buy from me, I am able to sell at a price that will enable them to do so profitably.

3189. You are paying the wages of the people who produce this in a currency which is depreciated?—Which is depreciated, and yet the wages are the same.

3190. And there has not been a corresponding fall in the commodity which you produce?—And there has not been a corresponding fall, that is exactly right. When I say there has not been a corresponding fall, you know the fall in the commodity varies with all manner of things.

3191. There may be a fall due to other causes, but there has not been, in your time, a corresponding fall?—A corresponding fall from the appreciation of gold? There has been a fall from the appreciation of gold, but not a corresponding fall.

3192. Then the industry of that character in that country has become unusually profitable?—Yes, I think so. The statement that I have put in here [*see* Appendix X.] from my partner relates to wheat rather than to nitrate of soda, because there are peculiarities in the condition of that manufacture. It is a kind of monopoly; though it is not a monopoly of mine, it is a monopoly, or nearly so, of the province of Tarapacá.

3193. Our argument does not depend on what the substance is; the economic use of the argument is that you are producing something there through the assistance of paid labourers, whom you pay at nominally the same rate as before, but practically at a much reduced rate, and that product which you get you sell without any corresponding reduction of the rate?—Without a corresponding reduction.

3194. And thereby you get great gains. Well, if that is so with respect to your trade, is it not a strong inducement to anybody to embark in industrial production in a country like that?—True, but then, as I told you, I do not mean to say that the ultimate result has been good throughout. The loss on every 1*l.* of capital that I have there is considerable.

3195. Possibly to you, who invested your capital some time ago, but to a person going in now and investing capital?—If he was quite confident that there would be no further reduction in silver, or no further over-issue of notes, of course he would not suffer, but it is the apprehension of future fall that seems to me to be the dangerous thing. There is plenty of loss going on year by year for those who have invested their money abroad, but there is for those who are thinking of investing, the apprehension of future fall.

3196. But if you invested in that way, taking the two variations separately, that of depreciation of silver through a greater quantity of the metal, and the depreciation of the paper, not taking the first one by itself; if you invested now in that country in any industrial undertaking, would not the price at which that could be realised in future vary with the depreciation of silver, so that if silver went down you would get a greater quantity of dollars? Supposing you took out 1,000*l.* and bought land, or a mine, or any other industrial machinery in Chili now, and in consequence of a further increase of silver, silver went down, would not you be able to sell what you had bought at a price increased so as to compensate that?—It does not follow that one should. Against the depreciation of our capital account we have to set the presumable increase of the value of the land or whatever property it is; but the value of a thing is what it will sell for. It will not actually sell in fact for that. The things do not move in the same plane.

3197. The same rapidity, perhaps?—No, they do not.

3198. Is it to the same extent or the same rapidity?—Both.

3199. They will, perhaps, ultimately?—They will not with any certainty, as we know, because we had necessarily to buy a good deal of land (the substance is found in the earth, as you know), and we have no certainty of being able to sell if we would.

3200. You are not certain about that, that they will not ultimately come to the same?—It would be after my time. As far as I am concerned, they will not.

3201. Is not there a movement already in respect to the price of land?—I have not seen it. I have not heard of such a thing. I know there are some of the nitrate grounds that we should be very willing to part with, but I have never seen any time when we could get what we gave. The land is of no value at all, it is prairie value really until you put up a manufactory. Well, the fear of having to invest capital in that manufactory, which capital may have to return afterwards at a lower gold price, deters people.

3202. You have to buy land from time to time?—We have had to. We are not doing it any more. We have not had to do so lately except small pieces where, here and there, there has been a dispute as to boundaries, whether a certain piece belongs to us or not; then one may have to buy it. These purchases are not of any moment.

3203. Do you find any variation in the scale of price in these little lots that you buy?—No.

3204. They are not important enough?—I do not think they are important enough; and, besides, in those countries you have got to give what the man can ask for it sometimes; sometimes the man has to take what you will give him for it.

3205. Now you said, with respect to your nitrate of soda, that it is a bit of a monopoly?—A monopoly of the province, you may say the whole of that part of Chili. Well, the effect of this stimulus given to that production is that a multitude of producers turn up. It is a monopoly in this way, because from time to time we agree amongst ourselves. There is a nitrate committee there, of the *salitreros* as they are called, and they agree how much they will produce. They now produce 10,000,000 quintals, and formerly they used to produce 7,000,000. Of course there is this great difference, that this committee of *salitreros* is not able to a nicety to control all the people. Some of them are always trying to break through the bounds that have been set to them. Thus, therefore, a larger amount of the commodity is produced than ought to be produced, but whereas I remember some years ago we said we should be satisfied to go on with the business if it was confined to 6,000,000, now we should be perfectly contented if it were confined to 8,000,000, and we see no great danger if there were 10,000,000 quintals produced, and the reason of that is that the demand has so greatly increased in France and Germany for sugar making.

3206. Apart from this syndic or ring, you would suppose that, since people are able to produce at no considerable increase of cost, wages remaining the same, and are able to sell at relatively a much greater price, there would be a competition between the producers, bringing down the price to something like the old level?—Yes, and that would be immediately the effect. Supposing the combination is broken down the immediate effect would be that the price would fall considerably, and that the smaller producers will be wiped out. They will cease to exist after a time. They will

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not dare to exist, because the larger producers, which have greater facilities for carrying down the nitrate to the coast, will be able to go on while those who are at a distance will not.

3207. Therefore your experience as a producer in Chili would not justify an expectation of a corresponding experience among the producers of wheat in the Punjaub?—No, reasoning merely from analogy, I should say that it would not; but my reasoning, which you will see in this paper that I put in, as regards wheat in Chili is exactly the same as wheat in the Punjaub, because there there can be no combination at all.

3208. Is wheat exported much from Chili?—Yes, I do not know how much, but it is. It is one of the regular exports, wheat, copper, and nitrate of soda.

3209. Has the export been increased since the depreciation of silver?—Yes, and would stop instantly if the exchange went up sufficiently.

3210. It has gone on increasing since the depreciation of silver?—It has gone on increasing. I have only told you what I have been told. My partner says that if the exchange would rise to 36*d.* or 40*d.*, or thereabouts, there would not be a single quarter of wheat produced for export.

3211. Would that be because the merchant would lose his profit?—Because the grower would lose his profit. The wheat-grower would have to pay his wages in dollars that were worth 36*d.*, instead of in dollars that were worth 25*d.*

3212. I should have thought the person earning the wages—the farmer—the person who works only through hired labour?—I should say what they call the *hacendados*, the landowners. The landowner is the man who immediately begins to cry out if the Government begin to talk of the resumption of specie payments. He says, "I shall be a sufferer; do not do it."

3213. (*Mr. Chamberlain.*) Do I gather from your evidence that, in your opinion, this state of things, this constant variation between the price of the two metals, has inured to the advantage of the wage-earners, that is to say, that in countries where gold is appreciated the wage-earners are better off, because they get the same amount of wages, and the wages are worth more, whereas in silver countries they get the same wages, but then the necessaries which they buy with those wages have not increased in price as compared with silver?—They get the same wages.

3214. They get the same wages in silver, and what they have to buy with silver is the same?—They remain where they were; and I think I may add that I suppose this to be the difference, that in a country of more restricted trade and with less facility of communication, where the wage-earners are less independent of the wage-payers, the difference of the value of that in which they are paid takes a longer time to get to them than it does in a country differently conditioned; consequently there is hardly any fall in wages in Chili, whereas here in England, as we learned on the Commission on the Depression of Trade, the rate of wages keeps up but the wage-earners are fewer, that is, the wage fund is diminished.

3215. Then I think I understand that you consider the great evil of the state of things is the uncertainty which affects all transactions?—That is so.

3216. Well, is the uncertainty caused by the variation in the metals greater than the uncertainty which exists from other causes?—No; but the uncertainty which exists from other causes is constant uncertainty, if I may use the phrase. It is constant; it would have been the same whether or not the currency had been depreciated.

3217. You say that this uncertainty interferes with investments in silver-using countries?—Yes, because there is an additional danger to them that there was not before. Before, there was always the danger of the balance of trade being unfavourable, and your remittance coming back with a considerable deduction from your original cost. Now, there is this additional uncertainty.

3218. The objection to investment arises from the apprehension that there may be a further fall?—Yes, I should say that is so; and, further, the depression in the minds, the mental feeling in the matter of the present state of things, makes people indisposed. A man who has been suffering, who has been losing year by year, feels less disposed to go on.

3219. Can you name any investment for capital in which there is not an apprehension of a possible fall?—No; but I find, in many cases at least, that if a possible fall has been turned into an actual fall for a series of years, one feels less disposed to go on in that country.

3220. And is the argument for making anything like a fixed relation between the two metals stronger than an argument for making a fixed relation between, say, iron and gold, or cotton and gold?—Yes; very much stronger, the thing is absolutely and wholly different; the latter is impossible, the former is not only possible, but has been done for 70 years.

3221. (*Mr Birch.*) Do you attribute the fall in prices, to any very important extent, to the appreciation of gold?—Yes, I do; to what I have called before *specific* appreciation of gold; though it is impossible for me to say to what extent; only that is my impression.

3222. And, to some extent, from the competition from silver-using countries?—Yes.

3223. You have spoken of the great inconvenience of uncertainty in exchange?—Yes.

3224. The trade of the United Kingdom with silver-using countries is naturally influenced by the exchange ruling between the United Kingdom and those countries?—Yes, certainly.

3225. But several of the so-called silver-using countries have a paper currency, based, it is true, on silver; but often, as in the case of Russia and several South American States, at a heavy discount?—Yes, certainly.

3226. This depreciation of currency in respect to the standard of value must be taken into consideration by the merchant trading with these countries, in the same way as he has to take into his calculations the variations in the price of the standard silver?—I say he, no doubt, has to take it in the same way, but not in the same degree, because the printing-press mine is much more easily worked than the other mine. In the case of paper-using countries, there are possibilities of further danger of a different kind, as you know.

3227–8. And therefore I say that the variations in the value of the paper currency are more frequent and often more important than any variation which has hitherto taken place in the value of silver as compared with gold?—They are often more important, if not more frequent; for example, as I said just now, I have known the dollar 46*d.* in Peru, and it is now 2*d.*, and the same with Buenos Ayres, I believe. But those fluctuations are absolutely irremediable by us: those caused by law can be remedied by law.

3229. I understood you to say that from some information which you got the other day, an Indian bank charged 2 to 2½ per cent. profit for selling exchange forward. Can you tell us if the same charge would be made for purchasing forward, because if so they must have very good business?—It might be very good. It would depend upon the risk.

3230. That would be 4 per cent. on the transaction?—Four per cent. by way of insurance; this is merely information from others. It is not a part of my own business.

3231. (*Mr. Barbour.*) I think your evidence was to the effect that, the exchange being now at such and such a rate, the banks said they would buy a bill in June next forward for a certain lower rate?—Yes.

3232. The whole difference would not be profit to the bank if the exchange should happen to fall, between this and June?—Exactly.

3233. (*Mr. Birch.*) They would make the two operations. They would buy and they would sell. I might be buying and you might be selling, and I want to know if they would charge me 2 per cent. for this risk which you have referred to, and 2 per cent. for yours?—I do not suppose it is so. This is what I understand to be the case. A merchant is

shipping to Calcutta and wishes to secure his exchange four months forward. The exchange of a few days back was 1*s.* 5$\frac{3}{4}$*d.* The Bank in ordinary times would charge $\frac{3}{16}$*d.*; so that his exchange would have been 1*s.* 5$\frac{9}{16}$*d.*, but now, the exchange being 1*s.* 5$\frac{1}{2}$*d.*, the bank will quote no rate forward, the uncertainty is too great. The bank would have no opportunity of making the supposed double operation.

3234. From an agricultural point of view, the benefit to arise to the agriculturist could only come from a suspension of production in silver-using countries, throwing the demand upon this country?—Yes, certainly.

3235. That is to say, that the Indian wheat, as I suppose, and the Chili wheat, interferes with the agriculturist here?—Of course it does.

3236. Sir James Caird said, in his statement before the Commission on the Depression of Trade, quoting a friend who he stated had had great opportunities of knowing the state of matters in America: "In "America they now produce as much in six months "as they can consume in twelve, the consequence of "which is that there is a superfluity of everything, "and that diminishes the price of everything"?—Of course I have never said, I do not suppose anybody has said, that the depreciation of silver or the appreciation of gold is the only offender; there are other causes.

3237. They contributed very largely to the fall?—Other causes there must be. I suppose that is rather a hyperbolical statement of Sir James Caird's when he speaks in that way. I do not know what the real facts are about that. That might be judged by the amount of imports of bread stuffs from America.

3238. I do not quite clearly understand what you said in reply to a question that was put as to the disadvantage of low prices; who suffers, the labourer does not suffer?—The labourer will suffer, the fall of price seems to be coming down to labour. The tendency is there, and there are fewer labourers employed in agriculture, the very thing you are speaking of. Land is being gradually turned from arable to pasture, and for every 200 acres of land you turn from arable to pasture, you turn six men out of employ. What we were told at the Depression of Trade Commission was that wages were falling in a great many places.

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3239. I saw a report the other day that the Eversham market gardeners complained that tons of the fruit grown last year was unsold and allowed to rot. Would you attribute this to depreciation of fruit or to an appreciation of gold?—I do not know what was the cause, but I have no doubt there must have been facility of getting fruit from France.

3240. That would have nothing to do with the currency?—It may or may not, of course, if the price of gold was high, the price of fruit would be low.

3241. (*Mr. Barbour.*) You said that the merchant could, by paying something, in many cases cover his risk by dealing with a bank buying or selling forward?—Yes.

3242. And if the merchant had two transactions at the same time, buying and selling, he could balance the one against the other?—I suppose he could.

3243. And if he abandoned the use of money altogether, and had recourse to simple barter, he would be free from risk caused by fluctuations in exchange?—Yes.

3244. You do not think it desirable that trade should be reduced to barter if it can be avoided?—Certainly not.

The witness withdrew.

Adjourned till Monday, 28th February.

Fourteenth Day.

Monday, 28th February 1887.

PRESENT:

The RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.	MR. L. COURTNEY, M.P.
MR. J. W. BIRCH.	SIR T. H. FARRER, BART.
THE RIGHT HON. J. CHAMBERLAIN, M.P.	MR. C. W. FREMANTLE, C.B.
MR. L. L. COHEN, M.P.	MR. W. H. HOULDSWORTH, M.P.

MR. GEO. H. MURRAY, *Secretary.*

Mr. A. D. PROVAND, M.P., was called and examined.

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3245. (*The Chairman.*) You are a merchant, are you not, connected with the trade with China and Japan?—Yes.

3246. Are you an exporter from this country, or an importer?—I am an exporter from this country.

3247. You are not at all concerned with the import trade from China?—I have not been so for about 13 years.

3248. But you have been an exporter for how long?—Since 1865.

3249. So that you are well acquainted with the details of the trade, as the trade was carried on before, as well as after, the alteration in the relative value of silver and gold?—Yes.

3250. That alteration first began to make itself sensibly felt in the year 1874?—Yes, about 1874.

3251. Could you explain to the Commission what differences were introduced into the method of carrying on the trade in consequence of the fluctuations which began at that date?—The difference was in financing. Before the fall in silver all goods exported to China or Japan were drawn for in this country, and the bills were renewed until the proceeds of the goods came back. Until 1874 exchange fluctuations were small, and they could to some extent be calculated upon. The active season for the shipment of produce from China and Japan is from June to September, and the rates of exchange at all the ports in those countries averaged higher during those months than they did for the rest of the year. Trade was therefore not in any way hampered by unforeseen fluctuations in exchange.

3252. Will you explain in rather more detail precisely how the operation was carried on?—I may say at once, to save trouble, that the same exchange conditions apply to all the ports in China and Japan with this difference, that in selling bills in this country the rate would be relatively rather higher for drafts on the principal ports. The bank might make a rather lower rate to the outside ports.

3253. Now, suppose that in the year 1873, before the fall in silver began, you sent out a shipment of

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cotton goods to Shanghai?—I bought an invoice of cotton goods in Manchester, and shipped it off. I drew on London for the amount of that invoice at six months, and if the proceeds had not returned from China within the six months, I had the bill renewed for, say, three months. By that time the proceeds of these goods would be back again in my possession.

3254. In what form?—In a sterling bill. The consignee of my cotton goods would sell them for taels (it in Shanghai), deliver the goods, get paid his taels, and go to the office of an Eastern bank in Shanghai, say the Oriental or any bank, and buy a draft on London, which he would remit to me.

3255. (*Mr. Fremantle.*) What is the par value of a tael?—It has no par value; it is a certain weight of silver (there are no coins), and this weight is not the same at all the ports in China. Its equivalent in sterling would be its market value per ounce as silver at the time being.

3256. Your consignee would sell the goods?—He would sell the goods, receive payment in taels of silver, go to the bank, and buy a draft in sterling on London, which he would remit to me. With the proceeds of that bill, when I received it in London, I would retire the original acceptance, and the transaction would be at an end.

3257. And if that bill did not come within the six months which the original bill was to run?—I renewed the bill in this country for three months. If it did not come in nine months I renewed it again for a further three months.

3258. (*Mr. Birch.*) But then you were trading with other people's capital?—I am describing how 19 invoices out of 20 were treated. Even the richest houses in Manchester would not use their own money. They would draw on London and discount the bill in the open market.

3259. And then renew again?—And renew again. A very wealthy house would sometimes not renew. This does not apply specially to the China trade, what I am speaking of just now relates to all foreign trade in respect of which bills are drawn and discounted in this country. Some houses will not accept renewals. They will accept once, but they will not renew. They will take a bill up at maturity, and remain out of their money until the proceeds come back.

3260. (*The Chairman.*) That being the general account of the way in which the business was conducted before 1874 would you now come to the method in which business is conducted now?—Well, the position we have arrived at at the present moment has been gradual. For some time after 1874 there was only a certain number of merchants who had become frightened about exchange. It was in 1876 that the great alteration in the method of financing shipments was made, and then a large number of those who traded to the East instead of drawing on London became so frightened about the fall in silver that they drew on Shanghai in taels, or on Hong Kong or on Japan in dollars, as the case might be. The shipper would draw a bill on Shanghai at 60 days, which a bank in London would buy at a rate of exchange they (the banks) fixed themselves, and this saved him from any further risk of a fall in the exchange.

3261. It transferred the risk to the bank?—It transferred the risk to the bank of a fall in exchange.

3262. (*Mr. Birch.*) But on the renewal?—There could be no renewal of such a draft in this country, because this draft went out of the country. It was drawn on the consignee in Shanghai against the goods, and in 19 cases out of 20 the bill of lading and the policy of insurance would be attached to the draft when it was handed into the office of the bank here in London.

3263. (*The Chairman.*) Then an exporting merchant in England before 1874 used to draw upon his own credit?—He used to draw it might be on a bank in London or elsewhere, or on a firm, in which case he would pay a commission to them for accepting his draft, or it might be on a house that was doing the business with him on joint account.

3264. But now he draws on the consignee to whom he sends out a shipment?—To a large extent. There are still some merchants who draw in Manchester on London. There are two ways in which it is done. He may draw on London and run his risk of the exchange, waiting till the proceeds came home.

3265. That is a method which has been given up?—To a large extent. The other way is often done. He draws on London for the sake of getting cheap money, and at the same time telegraphs to his correspondent in Shanghai to buy forward as much exchange in sterling as the proceeds of the goods will amount to, thus ensuring himself a certain return for the goods when the proceeds come home. This is done to an enormous extent with India, but to a smaller extent with China, on account of difficulties which I will by-and-by point out.

3266. Can you explain to the Commission in what way the new system compares unfavourably with the old system, as far as the exporting merchant is concerned?—In exporting to China we suffer far more on account of the fluctuations in silver than those do who trade with India. One reason is the fact that the India Council being the principal sellers of bills on India, practically enables them to control the market rate of exchange. I think we should clearly understand this, because, as I will show you afterwards, our way of doing business with China makes the rates we can obtain from Eastern banks for our bills on that country far less favourable than the rates of exchange obtainable by merchants shipping to India for their bills.

3267-9. I understand what you are coming to, but I first want to understand how the fact that the India Council are the great sellers of bills, and that they, therefore, control the rate, is any advantage to the India merchant?—The India Council sell annually about 14 millions sterling of drafts and telegraphic transfers, which are payable in Calcutta, Bombay, and Madras. They are, therefore, the largest sellers of exchange, and practically control the rate. There are two ways in which you can remit to India. You can buy silver and send it out there, or you may buy telegraphic transfers or bills from the India Council, which are collectable out there. They sell 14 millions sterling annually of these bills. The only competition the India Council have in selling their bills is with silver, and there are only a few millions of silver sold in London every year. The whole of the export from Europe to the East last year was between six and seven millions, and of this the sales in London were probably not one third. Another reason is that those 14 millions of Council bills are sold by open tender.

3270. Then is the advantage which the India merchant obtains from this system entirely due to the fact that the India Council flood the market with bills, and drive the price of bills down?—No, the effect is to enable Eastern banks to provide themselves readily with cover for business already done or to be done in India. The advantage to the India merchant is that the India Council, by their large, open and regular sales of Council bills, really stand over the banks, so to speak; the result is keen competition between the banks who are willing—indeed, I may say compelled—to buy merchants' drafts, and sell their own on India or on London at close rates.

3271. Is there any other reason?—Then India has several shipping seasons during the year succeeding each other, namely, for seeds, cotton, indigo, wheat, rice, &c. There is, therefore, a large export business doing from India during a great part of the year, and most of those exports can be, and are, sold "forward," such as cotton, seeds, rice and wheat. Few shipments of these articles are made on speculation, that is, shipments that are not sold until after their arrival in this country. The usual way of doing this export business is to take the price at the shipping port, the rate of exchange for drafts on London, and to offer the produce by

telegram, at a laid down sterling price. If a sale be effected on this side, the offer is accepted, and the merchant in India buys the produce and fixes the exchange. The transaction is then complete, and much business is done in India in this way for future periods of two, three, four, five or six months, and sometimes even longer.

3272. I thought you explained to the Commission that sales of precisely a similar kind were done with Shanghai?—No, nothing like this at all.

3273. Do they differ in quantity or in time?—There is no forward business with Shanghai, or very little. As the produce business from India enables the banks to buy bills on London "forward," they in turn sell their own bills on London "forward," chiefly as remittances for proceeds of imports sold in India. They thus obtain "cover" transactions, and as the sale on India by the India Council of 14 millions per annum to a large extent controls the rate of exchange, competition is created between the banks, and under ordinary circumstances, in a free market, the Indian banks cannot obtain a rate of exchange that will cost the merchant more than, say, 6 per cent. per annum for the use of their money on a draft sold to a bank in London against a shipment of manufactured goods to India. That explains how the "forward" business is done with India. All the before-mentioned conditions are wanting in the trade with China and Japan. There is nothing similar to India Council bills sold on these countries, and China and Japan have only two principal exports, tea and silk, most of which is shipped between June and September, and tea cannot be sold "forward," but only after it has arrived and been sampled. The banks are, therefore, unable for the greater part of the year to obtain "cover" business in China and Japan as they do in the trade with India, and on this account they will not buy drafts on China and Japan against shipments, except at rates which cost the merchant about 12 per cent. for the use of the bank's money while the draft is running, and he must either pay this to the bank to be relieved of the risk of a fall in exchange, or wait the return of his proceeds, meanwhile taking the risk himself.

3274. What that comes to is that the Indian trade can be done on cheaper terms, because there is an export transaction corresponding to every import transaction?—Yes.

3275. But the China trade cannot be done on such terms, because there is not an import transaction corresponding to every export transaction; that is a summary of it?—Yes, that is the summary of it.

3276. The only part that is not quite clear to me is what connexion there is with the fact that the India Council are the great sellers of bills?—If the India Council did not do that, and "cover" business was not obtainable as I have described it, then the banks would make the rate on India as on China, but they do not make the rate on India; the rate is forced on them by the India Council, or, rather, it is a rate settled by such open competition that they cannot make a different rate of their own. A merchant can buy an India Council bill as well as a bank. Any person may buy it. To give an illustration, if I, an importer of produce from India, cannot get what I think is a fair rate in India for my produce bill from the bank, I can buy an India Council bill or telegraphic transfer here, wire it out, and pay for my produce with it.

3277. (*Mr. Birch.*) And the 14 millions of Council bills in England are very much used?—They are sold by the India Council and bought chiefly by the Eastern banks in the way I have described, and practically control the rates of exchange with India. Here is an illustration. Put yourself in the position of a merchant exporting a cargo of produce from India. He buys his cargo, say, in Calcutta, and draws against it in sterling on London. Well, if the banks wanted to "squeeze" him (that does not mean anything dishonest; it merely means getting a high rate), that intention would be very easily defeated. The merchant would telegraph to London that he could not sell a bill except at such and such a price, and his correspondent in London could immediately apply to the India Council and buy from them a telegraphic transfer of rupees payable in Calcutta, with which he could pay for the produce, so that the India Council really control the rates of exchange with India.

3278. (*The Chairman.*) So that I understand there are two reasons why the trade of India is carried on under more favourable terms with this country than the trade of China. The first is the fact that there are import transactions in the Indian trade covering export transactions, and the second and wholly distinct reason is that there is such open competition for the sale of bills in the India trade that practically the merchant is able to get better terms?—That is so.

3279. Is it too strong a thing to say that the banks form a ring with regard to the China trade?—No. They do not "squeeze" the merchants; but in making the rate in buying bills on China, they make it what they think will leave themselves reasonably safe.

3280. As I understand the rate is nearly double in the China trade?—It is really more. I have understated it. By the rate I understand you to mean the cost in interest to the merchant for the use of the bank's money when he sells to the bank a bill on India drawn against a shipment of goods.

3281. If the banks make a fair profit on the India trade, why cannot they do the same on the China trade at the same rate?—Because they make the one certain at the time and the other is problematical; it is a speculation.

3282. And it is a speculation because they cannot "cover" the transaction?—That is it.

3283. So that the banks really do not charge more than the legitimate insurance for their transactions in the China market?—I do not think they do; the rates are always liable to variation. They cannot "cover" themselves as they may do with the India business. The transaction must therefore be open at their risk for an uncertain time, so they make "wide" rates of exchange, between what they will buy at in London and sell at in Shanghai at the same time. The Eastern banks do not "squeeze" merchants trading with China and Japan, the small profits in Eastern banking show this, but the fluctuations in exchange are rapid and severe, and they fix the outward rates so as to make themselves reasonably safe. They really have almost complete control over the outward rates to China and Japan.

3284. These two reasons that you have given us for the superior facility of carrying on the Indian trade really resolve themselves into the one reason that you can have "covered" transactions in the one case and not in the other?—Yes.

3285. And it does not turn on the India Council bills at all?—Yes, it does. It is because India Council bills can be bought at any time, and also because exports to and imports from India can be and are sold "forward" to a large extent.

3286. But if neither banks which are concerned with the Indian trade nor the banks concerned with the China trade make more than an average profit, the whole difference between the rates which they charge must be due to the additional risk of the one kind of transactions as against the other?—I have spoken of the small profits which Eastern banks have made. For the last 13 or 14 years there is no Eastern bank that has made large profits, except the Hong Kong and Shanghai Bank. I cannot say if the China and Japan business pays Eastern banks better than their India business, as separate statements are not given in the published accounts.

3287. (*Mr. Birch.*) You spoke of renewals, do not they charge you an extra rate for renewals?—There are no renewals possible with bills sold to Eastern banks against shipments. For shipments drawn against in this country an accepting bank or firm would charge $\frac{1}{4}$ per cent. or more for renewing an acceptance. The commission would depend on the

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position of the drawers, the nature of the business, and other circumstances.

3288. It is trading on the bank capital?—All foreign trade is done with bank capital to a large extent. The average merchant doing business with the East, I should say, trades nine tenths with the bank capital, but a manufacturer does not, because his capital is in his mill and machinery.

3289. (*The Chairman.*) You have explained to the Commission that, as insurance against risk, this very heavy charge is laid upon the merchant. Could you tell us in pounds, shillings, and pence what it amounts to?—I will give you an example:—

On the 16th November 1886 the rate of exchange, London on Shanghai, for 60 days' documentary bills was 4*s.* 5*d.*, *i.e.*, 100*l.* drawn against a shipment of merchandise at 60 days' sight, at 4*s.* 5*d.* per tael, would fall due in Shanghai in 105 days (passage 42, usance and grace 63), and the bank would then collect 100*l.* at 4*s.* 5*d.*=taels 452·83.

On the same day (16th November 1886) the bank rate in Shanghai for telegraphic transfers on London was 4*s.* 7⅜*d.* per tael. Assuming (for the purpose of this illustration) this rate remained the same for 105 days (the time it would take to receive and realise the merchandise in Shanghai), the consignees could then (if the goods had not been drawn against) with the taels 452·83 be able to buy a telegraphic transfer on London at 4*s.* 7⅜*d.* for 104*l.* 9*s.* 7½*d.*

In the above illustration the merchant (if he drew against his shipment) would have paid the bank 4*l.* 9*s.* 7½*d.* for the use of the 100*l.* for 105 days, which is at the rate of 15*l.* 5*s.* 9*d.* per cent. per annum. Not to confine the example to a single date, I take the two rates, viz., the bank's buying rate in London on Shanghai at 60 days' sight, and its selling rate in Shanghai for telegraphic transfers on the same day for the middle dates in each of the last four months.

1886.

16th Nov.—Buying rate in London, 4*s.* 5*d.*
Bank telegraphic transfer rate in Shanghai, 4*s.* 7⅜*d.* = 2⅜*d.* = 15*l.* 5*s.* 9*d.* per cent. per annum.

14th Dec.—Buying rate in London, 4*s.* 5¼*d.*
Bank telegraphic transfer rate in Shanghai, 4*s.* 7⅜*d.* = 2⅜*d.* = 15*l.* 5*s.* 9*d.* per cent. per annum.

1887.

18th Jan.—Buying rate in London, 4*s.* 5½*d.*
Bank telegraphic transfer rate in Shanghai, 4*s.* 8¼*d.* = 2¾*d.* = 16*l.* 17*s.* 11*d.* per cent. per annum.

15th Feb.—Buying rate in London, 4*s.* 4¾*d.*
Bank telegraphic transfer rate in Shanghai, 4*s.* 7½*d.* = 2¾*d.* = 16*l.* 17*s.* 11*d.* per cent. per annum.

I have assumed that the rate remained the same for 105 days after each transaction, and if it did so the rate of interest above stated would have been the exact price paid by the merchant for the use of the bank's money, being at the same time secured against any fall in exchange.

The differences are not always so much as shown above, viz., 2⅜*d.* and 2¾*d.*, but the average for all last year was nearly 2*d.*, and this for 105 days' use of, say, 4*s.* 5*d.* (average value of a tael), is about 12 per cent. per annum. A few of the bills on Shanghai are drawn at 90 days, and the banks buy these at ¼*d.* per tael less than 60 days' bills; this would be, say, 2¼*d.* difference for 135 days, or, say, 11½ per cent. per annum. The average cost to the exporting merchant of 60 and 90 days' drafts drawn in taels or dollars on China or Japan against shipments may be taken as more than 12 per cent. per annum, and he must either pay this to fix his exchange or take the risk himself.

I will hand in a table showing the average transactions during the last 13 months. The average will be found to be 1¾*d.* (*See* Appendix XI.)

3290. Why has the bank at the same time charged 13 per cent. for one transaction and 11 per cent. for another?—They buy a 90-day bill at ¼*d.* per tael less than a 60 days'.

3291. How is that?—That is a rule with them; they make ¼*d.* difference, which is about 6 per cent. per annum for the extra 30 days. I am informed very few of the bills are drawn at 90 days; the bulk of the business is done at 60 days.

3292. But if a merchant can get money at 11½ per cent. if he draws at 90 days, and has to pay 12 per cent. if he draws at 60, why does not he draw at 90?—There is this to be taken into account: a 60 days' bill will usually meet the time when the goods will be paid for in Shanghai, provided there is no unusual delay in clearing them. In many cases the buyer of the goods will have paid for the goods and taken them away in 60 days. If you had a 90 days' bill you would only be allowed rebate at the rate of 2 or 3 per cent. per annum for retiring the bill before maturity.

3293. So that you do not borrow at 90 days because you cannot use the additional 30 days?—That is it; occasionally it might suit to draw at 90 days, but 60 days would usually be sufficient.

3294. In spite of the fact that you get the last 30 days at much better terms than 60 days?—Yes. The banks make advances against shipments at 6 and 7 per cent. per annum, but in such cases the merchant runs the risk of the exchange which is taken at the rate current at the port of arrival in the East when the advance is paid off. The banks will buy your bill from you or advance the money in sterling. In the latter case they have no risk of exchange, and the advance is paid at Shanghai, or wherever it may be, at the rate of exchange of the day.

3295. Then I am to take it that the difference between 6 and 7 per cent. on the one hand and 12 per cent. on the other represents the charge for insurance which the bank has made to the merchant?—Yes, it marks their sense of the risk. To prevent misapprehension I may say that the foregoing deals solely with the cost to the merchant trading with China of trying to guard against a fall in exchange, and is not to be understood as describing the profits made by banks on those very transactions, as these vary in different banks according to the judgment of the managers. They use the money, after they get it, in different ways in different banks. With that I have nothing to do, it is with what it costs the merchant to avoid a loss by a fall in exchange by selling bills to the Eastern banks that I am dealing.

3296. Have you got any figures showing at what rate a similar transaction could be carried on with India?—The banks buying rate in London for 30 day drafts on India, and their selling rate in India for telegraphic transfers on London on the same day, usually differs ⅛*d.*, making a cost to the merchant who sells them his draft on India of about 5 per cent. per annum. If the bank rate of interest in London is low, say 2 to 3 per cent., the difference in the Eastern banks buying rate and their selling rate in India for telegraphic transfers on London will then usually be only $\frac{3}{32}d.$ With a high bank-rate of interest in London it may reach $\frac{3}{16}d.$, which would be a cost to the merchant selling a bill in London on India at 30 days' sight of about 7½ per cent. per annum.

3297. Then am I right in saying that in this case 2 per cent. is what is charged by the bank for risk; in other words, the difference between 3 per cent. being the bank rate and 5 per cent. being the charge for the bill?—I should say not exactly that. An Eastern banker would not lend his money at 5 per cent., though sometimes it may cost the merchant no more by the rate at which he can sell his drafts.

3298. (*Mr. Courtney.*) The bank would charge beyond the bank rate in any case, risk or no risk?—

Yes. It has to be noticed that though it may cost the merchant only 5 per cent. the bank would not lend their money for 5 per cent. Eastern banks give 4, 4½, and 5 per cent. on their deposits, and they could not possibly do it, but when the merchant can sell his drafts on India to the banks at a difference of $\frac{1}{8}d.$ on the telegraphic rate in India it only costs him 5 per cent. per annum for the use of the bank's money; but if he took an advance in sterling money he would have to pay 6 or 7 per cent. or more to any Eastern bank.

3299. (*The Chairman.*) Will you explain the paradox, because it seems so at first sight?—Because an Eastern bank is an exchange office. It has no resemblance to an English bank whatever. Eastern banks lend their money chiefly in the East, and must advance it at least at 6 or 7 per cent. An Eastern bank is not a bank in the ordinary sense in which we know a bank in London.

3300. But, practically, for those 30 days the merchant does borrow money?—Yes. He sells them a bill which they collect, say, in Bombay. What they do is this: Having bought a bill from the merchant here, against that they in turn buy a produce bill in Bombay, and it is the difference between the two that is their profit.

3301. And, strictly speaking, the banks do not lend the money to the merchant?—Strictly speaking, they do not. It is an exchange, and not a loan transaction that takes place between them. The merchant of course gets the use of the money which the bank gives him for his bill. The bank may on the face of many transactions get only 5 per cent. But it turns its capital over many times every year, and it is the little it gets between every exchange transaction that makes up its profit.

3302. It is not the case of an English bank lending its deposits to a merchant?—No.

3303. (*Mr. Birch.*) The profit is out of the exchange?—Yes.

3304. It is the same banks that do business with China and Japan that do business with India?—Yes.

3305. The great merchants of India used to do this business which is now done by Indian banks. The profit was made on the exchange. That is what the Eastern banks make now, is not that so?—Not exactly. The buying and selling of drafts against the import and export business which these banks do now was not done at that time at all, there was nobody to do it. The business of India banks has grown up with themselves, they created it. They are simply dealers in exchange.

3306. (*The Chairman.*) Certain witnesses who have come before us have told us that the Indian trade suffered from the reasons incident to an unstable exchange, very much in the same way as China suffers. Can you give us any facts which would confirm that statement, or the reverse. Are you of opinion that the Indian merchant suffers much from the uncertainty of exchange?—Well I do not trade with India.

3307. He suffers much less than you do?—I should say so.

3308. But you do not know whether he does suffer at all?—Well I have got an opinion respecting the matter. I think that the business from this country to India has suffered, but, I think, in that from India back here India itself in some way is benefited.

3309. (*Mr. Chamberlain.*) I understood you, in the early part of your evidence, to say that in the case of India it was always possible for the Indian to "cover" himself?—So it is.

3310. And consequently that he was not subject to the disability and loss which affects China and Japan?—Not to anything like the same extent. I have not pronounced any opinion as to whether the Indian suffers or not in his export trade from India, but in order that you might understand how we suffer in China, I have shown you how the Indian can practically hire a bank's money at from 5 to 7½ per cent. per annum, say 6 per cent., on an average; whereas I cannot hire it to cover myself from any Indian bank under 10 or 12, and I have known it 20.

3311. (*The Chairman.*) I quite understand that. All we wanted to know was whether you had any information to give us as to whether the Indian merchant suffered at all. It is obvious that he suffers much less owing to the fact that the bank can cover every transaction, but what we wanted to know was, whether there was not a margin uncovered in the trade which caused a loss to the merchant. Perhaps you have no specific information to give us?—I would be speaking too much at second-hand if I did so. There is one thing which I want still to mention about the exchange. I have said the banks will take the risk of exchange on terms which cost the merchant about 12 per cent. per annum, but unless the merchandise has been sold even these onerous terms leave him still open to the effect of a rise in exchange, that is a corresponding decline in the sale price of goods, which invariably takes place promptly in every part of the East, though a fall in exchange is never met to the full extent by a rise in the sale price, nor even partially, until a dearth of supply compels the dealers to raise their offers.

3312. But why is the price of goods more sensitive to a rise in exchange than to a fall in exchange?—Because if a merchant is trading, say, in Shanghai, and the exchange were to rise 1*d.*, and he can sell grey shirtings of a certain quality at T 1·50, this T 1·50 is on account of the rise in exchange immediately worth 1½*d.* more to him; and if he was willing to sell at T 1·50, the old rate, he will be a more willing seller still at, say, 1½*d.* higher. But competition will prevent him continuing to ask T 1·50. He at once offers the buyer the goods at, say, T 1·48½. The Chinaman who buys has nothing to do with the sterling exchange, and if he were a buyer at T 1·50 he will certainly be so at anything under that price. That is how a rise in exchange operates so quickly in causing a decline in the market price of goods. On the other hand, if exchange fell, then the Chinaman would not raise his price to meet it until there is a dearth of goods in the place, and then he raises it, not because exchange went down, but because goods have become scarce, and he cannot get them unless he pays more money. The last severe decline in exchange took place between March and August last year, and there was no corresponding advance in the market price of imported goods to meet the fall in exchange. (*See* Appendix XI.)

3313. (*Mr. Birch.*) But supposing exchange has remained the same, and the cost price has gone down 2*d.*, the effect would be the same?—Exactly the same effect follows in the foreign market, not perhaps so promptly but ultimately to the same extent. If the price goes up in Manchester the Chinaman will not give a corresponding advance until there is a scarcity of goods.

3314. Or the exchange comes down?—Or until something happens on account of which he is compelled to give a higher price.

3315. (*The Chairman.*) But the price of grey shirtings in Shanghai must always depend on the supply and demand?—Yes, but a demand for forward delivery can be supplied at any moment. If I were living there I could offer a man goods cheaper on account of a rise in exchange or a decline in the Manchester cost price. The goods might have to be shipped from Manchester. A large amount of the import business in India is done "forward." It is only a very small per-centage of the India business in Manchester goods that is not already settled before the goods are bought and shipped.

3316. (*Mr. Houldsworth.*) But if the demand does not warrant that you will have a slight trade later on?—Yes.

3317. (*The Chairman.*) Is there anything else you would like to lay before us in regard to the evils of uncertainty?—On account of the severe fluctuations in exchange the export merchant must have sold his

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goods and also settled his exchange to be free from what may be hazardous speculation. Even then his risks do not end. With each transaction he has three contracts open, one with the manufacturer, one with the bank, and one with the buyer in a foreign country; and if the first fail to deliver at the time specified (and this may arise in many ways beyond his control), the merchant is liable for an exchange claim to the bank, and probably also to the buyer, neither of which claims could have arisen before the relative values of silver and gold became so much disturbed. A great number of exchange claims are open at the present moment. I know one seller of goods in Manchester who has three exchange claims just now for between 400*l.* and 500*l.*

3318. Due to the fact that the exchange has altered or to delay by the failure of the manufacturer to fulfil his part of the bargain?—Yes, to both; and in two out of the three cases the failure of the manufacturer was from breakdown of machinery. He could not help that. Delays may arise from many causes beyond his control. I know I am liable to the buyer in China for the goods, and to the bank if I have sold them a draft forward, but I cannot compel delivery from a manufacturer in Manchester. The custom is, if I like to wait I will get them after, say, a strike is over without any extra price, or I may cancel them if I please, but I cannot do anything more than that. I have never yet said anything about liability to any bank here. If I were to sell bills to be drawn against goods to a bank here, and be unable to get delivery of them on account of a strike, I do not know that the bank would allow a strike clause to relieve me from liability, because they in turn would have "covered" the business, and would lose their profit on the bills if I did not deliver them.

3319. They will charge you for the delay, and besides that for the fall of price during the delay?—Their claim would be that which they had lost, which their claim would show. These things have all risen up and hampered and harassed our trade with China and Japan, in consequence of the fluctuations in silver, and since the fall in silver.

3320. Have you any facts to bring before us which would indicate that the fluctuations of exchange had injuriously affected the Lancashire manufacturer?—I can give you one case in connexion with the yarn trade. At one time all the cotton yarn sold in China and Japan was exported from the United Kingdom, but now almost the whole of the coarse counts, 16/24's, consumed in those countries are shipped from Bombay. The export from the United Kingdom is now nearly confined to 28's/32's and finer counts, which, to the present time, are not manufactured in Bombay.

The first 50 bales of cotton yarn were shipped from Bombay to Hong Kong in 1866, but the growth of the trade was not very rapid, and it had only increased to about 3,000 bales per annum in 1874. At this time the great fall in silver commenced, and other conditions then came into play which benefited the Bombay mills and damaged those in the United Kingdom. And these conditions have since then operated in the following way.

The capital of the Bombay mills is in rupees. The wages are paid and the cotton and everything used in the mills is also paid for in silver, except a small part of the stores and the coals; these, being imported, are bought on a gold basis, *i.e.*, as silver falls or rises in value compared to gold these articles cost the Bombay mills so much more or less; but, except for these, all the outlay of the Bombay mills is in silver.

China and Japan, like India, have a silver currency, and the freight and insurance on goods from India to China and Japan is paid in silver. All goods are sold in China and Japan for silver, and the following table shows the rate of exchange from 1873 to 1886 for bank drafts drawn in Shanghai on Bombay, by which the proceeds of yarn shipments would be returned to Bombay.

DEMAND RATES of EXCHANGE in Shanghai on Bombay per 100 Taels.

Year.	Rupees.
1873	306½
1874	306
1875	306⅓
1876	315
1877	307¾
1878	309
1879	305⅛
1880	307⅛
1881	307¾
1882	307
1883	308
1884	307
1885	306
1886	309

It will be observed the rates of exchange during these 14 years were very light. The high average of 1876 was caused by a monetary panic in Shanghai, and this for the time being favoured the sellers of yarn imported from India.

I have already explained that the entire outlay of the Bombay spinner is in silver (except for coals and a few stores); that he sells his yarn and receives the proceeds also in silver; and that, therefore, no variation of the relative values of gold and silver affect him, except on coals and a few stores. The advantages to him are, therefore, that the trade is free from any speculative element (except the market price), as he knows what the sale of his yarn in taels (or dollars, as the case may be) in China or Japan will give him in rupees in Bombay. Much of the yarn is sold in China and Japan for delivery at forward dates, and he can make such bargains without fear of exchange fluctuations, as he can reckon on his out-turn in rupees within a fractional per-centage. Under these favouring conditions the export of cotton yarn to China and Japan has increased as follows:—

	Bales.
1874	3,000
1875	9,000
1876	17,000
1877	28,000
1878	47,000
1879	50,000
1880	67,000
1881	69,000
1882	91,000
1883	112,000
1884	141,000
1885	173,000
1886	220,000

It has gone from 9,000 in 1875 to 220,000 bales in these 12 years. During the 14 years under review the position of the Lancashire spinner has been as follows: So far as he spins from cotton not of Indian origin his business from the start is on a gold basis in every respect; but if he spin India cotton, and most of the common counts, say 16/24's, exported to China and Japan are spun from India cotton, he begins his operations by buying cotton on a silver basis, *i.e.*, if silver fall relative to gold he will get more cotton for each sovereign, but having bought his cotton this is at once put on a gold basis by being drawn for from India on London in sterling, and afterwards the business is entirely on a gold basis, the freight and insurance to China and Japan being paid in sterling.

The spinner himself may not be the actual buyer of the cotton in Bombay, but it is bought and paid for by the actual importer in the way I have described. The moment it is shipped from Bombay it is put on a sterling basis.

The yarn is sold in China for silver (in taels or dollars) and the proceeds returned in a draft drawn in sterling on London. The following table shows the average rate of exchange for 14 years:—

DEMAND RATES of EXCHANGE in Shanghai on London per Tael.

	s.	d.
1873	5	9
1874	5	8¾
1875	5	7
1876	5	4¼
1877	5	5¾
1878	5	2¾
1879	5	0¼
1880	5	1¾
1881	5	1
1882	5	1½
1883	5	0¼
1884	4	9¼
1885	4	7
1886	4	6

The foregoing table shows an almost uninterrupted decline in the exchange during the 14 years, until, in 1886, there was a fall of 21¾ per cent. on the rate in 1874, and this decline has, during all this time, adversely affected the Lancashire spinner in three ways:

(*a.*) As exchange fell in the East the price in China for English yarn could not be raised to meet the fall, as the fall did not affect the Bombay spinner, and he, therefore, accepted the same price:

(*b.*) The exporter of Lancashire yarn could not sell for forward delivery, as he was unable to estimate how much the sale price would produce to him in sterling:

(*c.*) His inability to estimate the sterling out-turn of his shipments caused him, instead of awaiting the receipt of his proceeds from the East, to sell drafts to the banks in London against his shipments; but though this relieved him of the risk of a fall in exchange, he did so on the terms of paying the Eastern banks what was to him an excessive price for the use of their money, and was, in this way, still handicapped against the Bombay spinner.

Then I have a table showing the number of bales of yarn exported from the United Kingdom to China and Japan.

	Bales.
1875	75,445
1876	74,843
1877	84,400
1878	89,670
1879	95,656
1880	109,877
1881	116,555
1882	84,579
1883	83,819
1884	95,341
1885	80,639
1886	64,553

In 1875 the export was 75,000 bales. It rose to 116,000 in 1881, and fell in 1886 to 64,000, so that last year is the lowest of any of the 12 years. It will be observed the trade was a growing one down to 1881, even though exchange had fallen a great deal in the meantime; but this growth was chiefly in 28/32 and other yarns, which Bombay cannot spin; but from 1882 to 1886 the trade has been a declining one, and last year marks the smallest shipments over the 12 years shown in the table.

3321. Has the decline since 1882 been in yarns which Bombay cannot spin?—Yes, the yarns which Bombay cannot spin have declined also. I will explain how that is. Bombay spins up to 24's easily, but they also spin 26's, and the natives can get a 26 Bombay cheaper than an English 28, so they come down a count or two, and so get a yarn which I suppose suits their purpose.

3322. They have produced something which is taken in lieu of it?—Yes, they have made something which is taken in lieu of it. The trade has not only declined, but for years past has been unprofitable, and a great many of the shipments which have been made over the past seven years have been in the hope that the superior quality, and the known marks of the Lancashire yarn would recover their position. Another reason for continuing the shipments was that certain mills in Lancashire could make nothing else, but within the last few years I am informed that nearly 20 mills have either stopped altogether, or have had their machinery altered in order to spin other counts. The loss to Lancashire on this account has been very great.

3323. You anticipate the decline which has been going on since 1881 will continue?—Yes, the export is now nearly stopped from Lancashire of 16/24's. I have not myself sent a bale for six or seven years.

3324. I suppose you would admit that that is largely due to the fact that Bombay had natural advantages in spinning the coarser yarns over Lancashire, but in addition to that you find, as I understand it, the chief cause arises from this 10 to 12 per cent. which the Eastern banks charge for assisting the merchant to carry on his business?—Yes, it is the uncertainty of the exchange which is the chief difficulty. The Bombay spinner and the Chinaman are on the same level in this respect, as they have both a silver currency.

3325. It appears that there are two entirely distinct reasons why the Indian merchant benefits as compared with the English merchant?—Till 1874 the Indian mills might be said to have created the trade they had by the natural advantages they possessed in being where the cotton was grown. They could make 16/24's, but their whole export trade to China and Japan at that time, from 1866 to 1874, had only amounted to 3,000 bales; but from 1875 to 1886 those 3,000 bales, now that silver troubles have come in, have become 220,000 bales.

3326. Yes, I quite appreciate the magnitude of the fact; what I was rather anxious to get at is your view of the causes?—I think it is not possible to distinguish between the differences in exchange and the uncertainty of it in that way.

3327. As exchange fell in the East the price in China for English yarn could not be raised to meet the fall, as the fall did not affect the Bombay spinner, and he, therefore, accepted the same price. Now let us suppose that the exchange, instead of falling, had risen in China, then, I presume, the Bombay merchant would not have been benefited?—No.

3328. So you see there is a distinction between the uncertainty whether the exchange rises or falls, and that other cause which is due to the fall in the exchange?—Well, if a fall or a rise took place during the currency of the transaction, of course those connected with the transaction, either in Lancashire or Bombay, would be affected, but if silver were to be steady at the present price for 10 years I could not say what would happen. I cannot say more exactly than by giving statistics how much of the Bombay export of yarns to China and Japan is to be ascribed to natural advantages, and how much to the fall in silver and subsequent exchange fluctuations.

3329. I do not wish to press you unduly on the point, but let us suppose that exchange had been very uncertain during these 10 years, so that nobody could foresee in the course of six months what the exchange would be, then I understand the Eastern exchange banks would not charge 10 or 12 per cent. for their money?—Yes, they would.

3330. And the merchant would not suffer?—He would suffer.

3331. But if the uncertainty had been on the whole due to a tendency to a rise in the exchange, though the Bombay merchant suffered a loss of 10 per cent. the English manufacturer would have gained?—A rise in exchange would favour us. If I expected a rise in exchange now I might ship heavily, and I would sell the goods forward as quickly as I could, and not settle my exchange, so that I would get all

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the advantage I possibly could if the rise came about as I hoped.

3332. Of course if the prices of everything, including labour, in England fell exactly as the exchange fell, there would be no loss to the manufacturer, if he could alter at the same time the interest on permanent debt and wages of his workmen?—Every transaction would then be on the same level.

3333. But it would be the same thing to the English merchant?—To the English manufacturer. Yes, if he gets everything at so much less to meet the lessened price, it would be precisely the same.

3334. Then you think the cause of his loss is, that the wages and interest on permanent debt have not altered as prices have fallen?—They have not altered; Lancashire workers earn as much in every part of Lancashire as they ever did at any time, and in some parts they earn more than they ever did before, even where the manufacturers are not doing so well.

3335. You have no other general observations to make to us?—There is another trade in coarse cotton cloth, which Manchester formerly did with China, and all I have said with reference to yarn applies to it. I have extracted a small table to show how the Bombay people have increased their exports of such cloths to China. (*See* answer to Question 3453.)

3336. (*Mr. Birch.*) I think you said that the Indian banks make no profits or little profits, whereas the China and Japan banks do good business?—It is the same banks that do the business with all these countries.

3337. I mean the portion that is done in China and Japan is advantageous. I understood you to say that relatively they do a much better business with China and Japan than they do with India?—It is a more speculative business. The profits may be more or less. Separate accounts are not published by the banks, so I am unable to say whether their India or their China business is most profitable.

3338. That is to say, the business which is favourable to them is, to a certain degree, speculative, and might result in a loss in the merchant's annual profits?—No, I expressly guarded myself against giving any opinion as to what profits the banks made out of this business. What I have said deals solely with what trying to guard against exchange fluctuations cost the merchant trading with China, and is not to be understood as describing the profits made by the banks on those very transactions as these vary in different banks according to the judgment and consequent action of the managers.

3339. The inference was that the whole banking business is a speculation in the exchange?—In China it is; and that is why the banks make such wide rates.

3340. Does it appear to you that the financing system of the banks has its disadvantages, inasmuch as they have to a certain extent over stimulated trade?—I do not think so. I have often heard the bad trade of the East ascribed to the banking facilities; but I do not take that view of it at all. I have heard persons inveighing against banks for advancing. In my opinion, if a bank is doing business with the East, and any person comes to them with proper security, it is not their business to inquire into whether his investment will pay him a profit or not, it is enough for the manager if he sees in the proposed business a profit for the bank with security.

3341. You have no experience, I suppose, of dealing with countries where there is a forced paper currency, such as Russia, Chili, or Peru?—No, none.

3342. Because there, you see, the variations are much greater in exchange than they are even with Japan and China. A forced paper currency has very much greater fluctuations than we have seen between the silver and gold?—Yes; but my impression is from what I have heard that the business is not conducted with those countries on anything like such close terms as it is with India. Another thing is that the export business of Chili has been over a long period, I should say, except with short intervals of prosperity, a very unfortunate business for exporters from this country. I speak generally; I have no special knowledge of it.

3343. The increased competition on the part of the Bombay manufacturers would appear to be rather a natural result of manufactories starting where the raw material is on the spot?—That was the original reason of the Bombay mills being started.

3344. And then when they had once started they would go on naturally producing?—They did, but they had very bad times. Their good times have come since 1875.

3345. But they have increased largely since 1875, have they not?—Yes, they are building mills in Bombay now. This fall in silver has been to a certain extent a bonus to them.

3346. (*Mr. Chamberlain.*) You say that at the present time you have to pay about 10 to 12 per cent. for the use of the money of the Eastern banks?—Yes.

3347. And with the exception of the Hong Kong and Shanghai Bank none of these banks, as far as you are aware, make much profit?—No, they do not.

3348. And even the Hong Kong and Shanghai Bank has had serious losses lately?—Yes, quite lately. That was by advancing against sugar in Manilla. I should say from the indiscretion of the manager on the spot, but on the whole it has been a very successful bank.

3349. But does not the fact that these banks make small profits, although they charge large interest, show that there is a good deal of risk in their transactions?—Yes.

3350. And is not the very heavy charge for interest due to the existence of this risk?—It is.

3351. Quite as much as to the question of exchange or fall in silver?—It is the exchange which is the risk, and if there had been no fall in silver there would have been no question of exchange. The risk is greatest in buying bills on China. For India they do not charge high rates. The bank business with India is competed for so closely, transactions are so easily covered, and, besides this, the Indian Council by their large sales of bills so control the exchanges that they cannot get squeeze rates, but with China they run greater risks. Every bill they buy in London on China is, so to speak, a speculation, and they make a high rate for it. In the China and Japan trades the banks practically make the rates.

3352. Yes, and they must lose money with many of their customers, or else their profits would be in proportion to the rate of interest which they charge?—At the first glance that would appear to be so, but some explanation is here necessary. Every decline in silver since 1873 has caused the banks severe loss. Their capital is in sterling and also their chief deposits. These were sent to the East when exchange was high and stand in the banks' books at nearly 2*s.* per rupee. But since the decline in silver they have written down this value, which has cost them several hundred thousand pounds, and much of their profits have gone in doing this. If during the 14 years the rate of exchange had been steady then the profits made by the banks in buying bills on China, on the terms shown above, would have been very large, but the tendency has been during all that time to lower rates until the average rate of 1886 was $21\frac{3}{4}$ per cent. below the average rate of 1873. In buying a draft in London on the East the banks were, in fact, buying so much silver, and, as in the case of China, they did not collect that silver until from $3\frac{1}{2}$ to $4\frac{1}{2}$ months after they had paid for it in sterling. They held this silver for at least part of that time until they got "cover," and in estimating the profits they earned allowance must be made for the fact that they were holding an article which over a period had a lessening value. The Hong Kong and Shanghai Bank's capital is in silver, because it is a local bank out there, and its profits have been chiefly derived from local business.

3353. Then, is not this the case, that if these banks made no bad debts, they would either make large profits or be able to charge less than 10 or 12 per cent. for the money?—I do not think they would take the exchange risks to China for less than 10 or 12 per cent., but of course they would have more profits than they have if they did not make any bad debts.

3354. Then as a result of these heavy charges for the use of money, you say that the Lancashire trade has suffered?—Our trade with China has suffered.

3355. I am speaking entirely of China and Japan?—It makes it a speculative gambling business in fact.

3356. And as a result of that, no yarns from 16's to 24's are sent to China and Japan?—None at all.

3357. And the remaining trade in 28's and 32's is seriously straitened?—Seriously crippled.

3358. And all that trade has gone to Bombay?—All that trade has gone to Bombay.

3359. So that every bale of cotton sold less from Lancashire means a bale of cotton more sold from Bombay?—It means more than that. Our trade has not only become less, it went up to 116,000 bales a year, and it would have gone on expanding.

3360. But whatever you have lost, whether of the old trade, or of trade which you might have got, has gone to Bombay?—A large part of what Bombay spins now would have been spun in Lancashire.

3361. This enormous advantage to Bombay is the result of the fall in silver?—I believe so.

3362. And that fall of silver is due either to an over supply of silver or to a short supply of gold?—Yes.

3363. That is to say, it is due to a natural cause?—Yes; but I must mention that that natural cause was prevented operating down to 1873.

3364. Now I ask you, do you think it fair that the legislature here should interpose an artificial obstacle to the advantage which is now gained by one part of the empire at the expense of the other, owing to natural causes?—I must answer your question as applying to the whole world. I believe it would be infinitely better to-day if silver and gold were tied together again as they were before 1873.

3365. This Commission have to consider whether legislation should take place in order to restore the old relations between silver and gold. The legislature which would have to give effect to our recommendations is a legislature in which India is not represented. I ask you whether you think it would be fair that we should propose legislation which would injure India, although it benefits Lancashire, when the object of the legislation, according to your own admission, is to interpose an artificial obstacle in order to do away with a natural advantage?—The advantages of returning to a fixed standard would be infinitely greater than the disadvantages. If I pass a certain law it may be a hardship in a particular case, but a benefit in 50 other cases, and I am asked about the particular case, not about the 50 other ones.

3366. (*Mr. Courtney.*) Supposing you admit that owing to the operation of a natural law one portion of the United Kingdom, which is a manufacturing portion, gets a great benefit, at the expense of another portion, which is a corn-producing portion, would it be fair for the legislature of the United Kingdom to interfere to prevent that one portion from obtaining the advantage, because it involves some disadvantage to the other?—Well, I can only answer, that I believe it would be infinitely better that silver and gold were again tied together.

3367. (*Sir T. Farrer.*) You have given us evidence of one particular evil, an evil to Lancashire, which is also at the same time a benefit to Bombay; now suppose the question rested alone upon the evidence which you had given us to-day, would you think it right that we should make the general alteration that Mr. Chamberlain has suggested.

3368. Do you think that the evils that you have told us of to-day are sufficient to justify a complete alteration in our currency laws?—These and other evils might be sufficient to justify us. I am not aware anyone has suggested making any change in our own currency laws.

3369. (*Mr. Cohen.*) You spoke of the Eastern banks charging 12 or 13 per cent.?—Yes.

3370. Surely if that rate were incommensurate with the business which is subjected to that rate it would cure itself by other banks starting as we find in every other business. Are we not entitled to assume that the rate, onerous as it is, is not beyond what the nature of the business calls for?—I quite agree with you, I do not think it is.

3371. Can you state to the Commission how long it is since an Indian bank was established?—There has been no India or China bank started for many years.

3372. That would rather indicate that the banks were not doing extravagantly well notwithstanding these high rates of interest?—Eastern banking has not been a profitable business compared with Colonial banking for a long time past, on account of the decline in and fluctuations of silver.

3373. If notwithstanding these high rates of interest the business has not been so profitable as to induce new banks to start, do you attribute that to the circumstance of the difference of currency creating difficulties which can only be met by these onerous charges?—I do.

3374. And there is no other remedy for these onerous charges but a change in the system of currency rather than a multiplication of banks. Is that so?—Yes.

3375. I suppose we may take it as a fact that if a merchant exports goods and imports against them the question does not enter as a factor into the case at all?—Oh, yes, it would.

3376. It would if no money passed at all?—He would have to collect the silver for his goods in China in order to buy tea with it, and he might not then be able to buy tea or anything else with the money.

3377. There would be no export of money at all, how would exchange enter into it?—The view that exchange could not enter into the question would sometimes be true if the merchant could on the day he sells his imports buy exports with the money, but in China this would at any time be difficult and for most of the year impossible. He would usually have to wait weeks and might have to wait months before he got his cash, and he could not buy tea or silk "forward," he could only do so when it came into the market and could be seen and sampled. Assume he sells his goods on the 1st of January; he afterwards delivers them, and gets his money some time in February; he may then want to buy tea with that money, but the tea season does not begin for three months afterwards, and if even it were during the season it meantime may have risen or fallen affected by the rate of exchange in sterling. Because as exchange rises they pay a lower price for tea, and as exchange falls they can afford to pay a higher price, and this is true of all exports from China and India likewise, because it is to the laid down cost in sterling on this side that the exporter of eastern produce looks.

3378. You were pressed by Mr. Chamberlain, and one or two other members of the Commission, as to whether it would be fair for the Government of Great Britain to interfere for the disadvantage of Bombay as against other parts of the country, assuming that you have established an advantage to Bombay, but is it not necessary in answering such a question as that to consider the elements of that advantage before you can give an answer as to whether it would be fair to interfere with them?—Yes. On this subject some apparently simple questions would require an essay to answer them.

3379. I understood you to say that natural causes were the factor in producing that advantage?—That is to say, the over-supply of silver.

3380. But let us take, for example, the land settlement of India, which was fixed in advance when the

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rate was a high one and has not been altered. That would be an element which you would not call a natural state of things. That is an unnatural state of things, is it not?—When you allude to rent, that was the rent of agricultural land in India. It would not affect a mill to any extent at all, the ground rent would be so very small.

3381. Does not that affect the rate of wages throughout the country, the rent which the Government exact for their land?—It may have some effect upon it. I have never heard such a thing stated.

3382. You consider the advantage which the Bombay manufacturer now possesses exclusively due to natural causes?—I consider the advantage which the Bombay spinner now possesses is, to a large extent, due to the fall in the value of silver relatively to gold.

3383. Then is the fall of silver a natural or a fictitious cause? — It is to some extent a natural cause, but there are now always several temporary reasons affecting the value of the metal itself. At present there is apparently not more than enough silver, as the continental people are buying, which maintains the price, yet nobody will buy exchange forward as they are frightened. Do you call that a natural or an artificial cause? Until 1873 silver was kept steady by the operation of law, but one cannot say that the removing of a law is a natural cause. That law in the first place interfered with some natural cause.

3384. Supposing that the fall in silver was owing to the action of continental Governments, would not that be a case which, in your opinion, might be met by legislative action on the part of our Government?—I do not think that any legislative action that we could take against them would have much effect on the value of silver except in conjunction with other Governments.

3385. (*Mr. Courtney.*) Supposing I were in Melbourne and went into a bank there with 1,000*l.* and asked for a telegraph transfer on London; I should have to pay something to the bank for giving me that facility, should I not?—You might or you might not; it would depend on the rate of exchange between the two places for the time being. If they did not want to remit having idle money in London they might even pay you something for giving it, but if they wanted to remit money they would charge you something for giving it to you.

3386. But what regulates the rate of exchange under normal circumstances?—The payments which the one place has to make to the other.

3387. The cost of transferring specie is the regulating cause of the rate of exchange?—Yes.

3388. In the element of the cost of transferring specie does the time occur which would be occupied in transferring it from the one place to the other?—Yes.

3389. Then the interest for the time occupied by transferring is an element in the rate of exchange?—It is.

3390. In the instance which you have given us, you suppose goods realised at Shanghai and a telegraphic transfer obtained on London replacing the original money, do you not?—Yes.

3391. And you make out that 12 per cent. is charged against the 105 days that would be occupied in the time between the original advance and the date of the telegraphic transfer?—Yes.

3392. Should you not, according to what you have already admitted, have taken into account as part of the rate of exchange of that telegraphic transfer the time which it would have taken to send money home?—I have not done so, because I have taken the telegraphic transfer rate.

3393. You have admitted that the telegraphic transfer rate involves, as a regulating cause of that rate, the time it takes to send money from the one place to the other?—I have not admitted it because a telegraphic transfer takes no time. I could work it out with absolute accuracy, and show that the merchant who drew on Shanghai, assuming the rate had not changed between the drawing date in London and repaying date in Shanghai, would have paid the bank 4*l.* 9*s.* 7½*d.* for the 105 days' use of their money.

3394. Supposing, in order to avoid the question of silver, I take the case of a gold-using country, Melbourne. If I go into a bank in Melbourne with gold money, and ask for a telegraphic transfer in London in gold, there is a certain rate of exchange charged, a certain price charged, and under normal circumstances the governing cause of that charge is the time which will be occupied in sending money from Melbourne to London?—No, there would not be, because you pay your money into the Melbourne office to-day, and the office of the same bank pays out the money to-day in London, and the money begins to earn interest in one place when it ceases to earn it in the other.

3395. (*The Chairman.*) You admit this, that the actual quotation of exchange between London and Melbourne need not necessarily be at par. If it differs from par, it differs because of the competition for bills either in London or Melbourne, that the rate of variation from par cannot exceed the cost of transporting the precious metals from Melbourne to London?—Yes; that is quite right.

3396. But, as matter of fact, you would also go on to to say, would you not, that the bank cannot charge interest on a telegraphic transfer for the whole time that would elapse, supposing money had to pass from Melbourne to London; the bank cannot charge interest for that period?—With telegraphic transfers the price will largely depend on the competition between banks created by their respective positions; and you may eliminate some things which would affect the rate for drafts drawn at a certain usance. The bank in Melbourne which has idle money in London will be delighted to sell you a telegraphic transfer without charge, they might be even willing to pay you a larger sum in London than you handed them in Melbourne.

3397. (*Mr. Courtney.*) And in that case the person who wants to send home money is saved the cost of sending it, and is saved the interest during the time it is being sent?—Yes.

3398. Do you deny that the interest is an element which he takes into consideration in the bargain?—The man who is buying telegraphic transfers does not go into these calculations at all; if he were buying a demand bill he would, because he would then pay no more to a Melbourne bank for a draft for, say, 100*l.* in London than that amount in gold plus freight and insurance to London, with a trifle additional for the convenience of the bill.

3399. And a man buying anything does not go into all the causes that regulate the cost of that article that he buys. If you look at the matter as an economist all elements of cost combine together in bringing about a particular price. The question I wished an opinion upon was, whether in the payment made for a telegraphic transfer, an element in consideration, is not the time that would be occupied in sending home the money, if the money had to be sent home?—I do not calculate that at all. I would not know if the banker had to send the money home.

3400. But you will observe, if my opinion which I have indicated is true, instead of taking in 105 days you ought to take in 170 days, and your 12 per cent. that you say the bank makes is reduced to seven or eight?—Why should I take 170 days? From the day I receive the bank's money in London against a 60 day bill on Shanghai, until that money has been remitted by a telegraphic transfer, and is again with the bank in London, only 105 days have elapsed.

3401. I should say you ought to take into account not only the time occupied in the bill drawn out, but some consideration for the time that would have been occupied in sending the money home. Supposing instead of the man going in and getting a telegraphic transfer he asks for a bill at the usual date?—Four months on demand.

3402–3. Would he pay the same for the one as the other?—No, he would not.

3404. Was that four months originally fixed as about the time that it would take to send home something that would realise the money?—Originally it may have been so. The difference in Shanghai would be about 1*d.* a tael between the telegraphic transfer and the four months' rate, say, about 2 per cent. I should like to say there are few things so puzzling as Eastern exchanges to those who are unfamiliar with them. For example, if the bank rate in London were to rise to 7 per cent. the telegraphic rate would fall in Shanghai, although the four months' bank rate might not change at all, and if the bank rate in London fell to 2 per cent. the telegraphic rate in Shanghai would advance, although in the meantime there was no change in the four months' rate. Telegraphic transfers are affected by circumstances which may not, or only partially, influence the dates for drafts drawn at demand, or at some months afterwards.

3405. (*Mr. Barbour.*) The exchange banks in the East, I fancy, frequently have their capital in gold, have they not?—Yes.

3406. The capital of the company is in gold. Many of the exchange banks have been started on a gold basis?—The Eastern banks, with their head offices in London, originally raised their capital in this country in gold.

3407. And they have had a portion of that capital in the East?—Yes, the most of it, and also the most of their deposits, which are also in gold.

3408. And I suppose they have been losing on that portion of their capital in silver in the East?—Oh, yes, very largely.

3409. (*Sir T. Farrer.*) Is there any export of yarns from Lancashire to Java?—Yes.

3410. Do you know how that is going on?—I do not think it has been a very profitable trade with Java for some time, but still there is a good deal of it done.

3411. Is it going on better or worse than the trade with China and Japan?—It is a much smaller trade. It is not one twentieth part the size of the China trade. With that country there are no disadvantages of exchange at all. The trade is only affected by market demand.

3412. I want to know, for that reason, whether it has suffered less than the trade with China and Japan?—The trade with Java has suffered from a special cause, the decline in the value of sugars, the same as the trade with Manilla.

3413. Is there any competition from Bombay to Java?—None that I know of. I do not think there is any yarn sent from Bombay to Java, none to speak of, because the Java yarn which they buy is all 40's.

3414. They buy the higher counts?—Yes.

3415. Then the yarns that are sent to China and Japan, are they all made out of cotton that comes from India?—No, the 16's/24's that used to be shipped from Lancashire to China and Japan were, I might say, all made out of India grown cotton, but the 28's and 32's that we sent there were chiefly made out of American cotton, but still some were made out of India cotton; when you rise above 28's/32's there is no Indian cotton used at all.

3416. And those which go from Lancashire to China and Japan now are chiefly made with American cotton, are they?—The yarn that goes from Lancashire to China and Japan is chiefly made with American cotton, very little Indian cotton.

3417. So that in the case of the yarn that goes from Bombay to China and Japan, the Bombay manufacturer has the benefit of the material on the spot?—He has that benefit.

3418. Whereas if the Lancashire manufacturer were able to compete with him in that he would be obliged to overcome the difficulty of sending the yarn from India to Lancashire, and from Lancashire back to China?—Yes.

3419. Do you know what proportion of the ultimate price of the article is represented by the cost of transport of cotton from India to England and back to China?—The transportation charges from India to Lancashire on the cotton to make a bale of yarn (weighing 400 lbs. net), and like charges on the bale when manufactured, from Lancashire to Shanghai, may be taken as nearly 30*s.* A bale of English yarn costing, say, 13*l.* on arrival at Shanghai, will include cotton costing about 8*l.* and 5*l.*, made up of manufacturing and transportation charges.

3420. (*Sir T. Farrer.*) There has been, as you say, a very great development of these mills in India lately, and I gather from some of the reports that they have been having a bad time in India these last two years?—I am not aware.

3421. You will find in one of the reports recently published that very few of the mills have been dividing more than 1 and 1½ per cent. dividend?—I did not hear about the 1½ per cent., but I have heard complaints and statements made of the extravagant way in which the mills have been worked. There is a firm in Manchester connected with Bombay mills, and two days ago a gentleman connected with them was in my office in Manchester, and he told me of one mill that had paid 10 per cent. since 1879. I do not speak of that as being general, but he told me that he was interested in some mills that had paid 10 per cent. since 1879.

3422. You do not assert that that is general?—No, I cannot speak with any degree of authority whatever with reference to anything relating to the financial position of the Bombay mills or what dividends they pay.

3423. Have you formed any opinion as to whether this difference in exchange arises from what people ordinarily call, whether correctly or not, appreciation of gold, or from depreciation of silver?—Well it would be more accurate to say that gold has appreciated, because, although it is true that silver has fallen relatively to gold, it has not fallen relatively to everything else.

3424. And gold has risen relatively to everything else?—All the world over, to everything else.

3425. Then supposing a man sends cotton from Lancashire to the East, and that when he gets back his price he receives a smaller quantity of gold than it was worth at the time that he sent it, but that gold is worth more, is it not?—That depends upon what he is going to do with it.

3426. But you told me just now that gold had risen against everything?—Well, that gold is worth more, but what he has to apply that gold to may be the same; he may have to pay wages and rent and various other things with it which have not meanwhile changed in amount.

3427. He may have to apply it to things in England which have not depreciated in comparison with gold, but taking things generally and the value of gold generally, the gold which he receives though smaller in quantity, is worth more than the same quantity of gold would have been at the time when he sent his cotton out?—Yes, it would be so far as he was not tied by what I might call fixed charges.

3428. Then if he goes on paying wages and wages have not fallen he will not have wherewithal to pay his workmen to the same extent as he would have if gold had remained at its former value?—Yes. You were asking about the appreciation of gold just now. It is sometimes said that it is not on account of the appreciation of gold that the prices of articles in general have fallen, but on account of the increased production of articles. I was going to mention cotton. It is 35 per cent. cheaper than it was some years ago, and meantime the quantity produced has not increased except to a small extent.

3429. (*Mr. Fremantle.*) How would you summarise the effects of the present state of things as regards the price of silver and the Eastern trade upon the Manchester trade?—I should say that Lancashire had suffered enormously through it.

3430. But have all classes suffered, or any classes specially?—Special classes have suffered most. I think all classes have been more or less affected.

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3431. Have there been many failures in Lancashire?—A great many.

3432. Have those been of merchants or of spinners?—Well, chiefly of manufacturers. I was going to mention that you must distinguish between manufacturers and spinners. The number of failures of manufacturers in recent years in Lancashire has been very great, and many estimates have appeared in the newspapers in Lancashire, and I have had estimates given to me by friends which point to this fact, that the capital of the cotton manufacturing business in Manchester has not paid 5 per cent. for 12 years past, but I am incapable of pronouncing any opinion on that myself. I am not a manufacturer. I have no interest whatever in these mills or in any mill, or in any manufacturing business whatever in Lancashire. There is one indication of this in the market price in Manchester of the shares in the co-operative mills. In Oldham there are 100 mills, the shares of which are dealt with in the market, and I think that very few of these shares are at a premium, and in such cases the premium is very small. They are almost all at a discount, and the discounts in some cases are enormous. If you like I could get a public report from Oldham showing the paid up values and present market price of the shares and send it to you. You would see in the list every mill, its capital, the number of the spindles, who made the machinery, the market price of the shares, and everything.

3433. (*Mr. Houldsworth.*) Would that sustain your argument at all with reference to India, because those you are speaking of spin 32's?—But they have been affected. I have already pointed out how they have been affected.

3434. You said 20's were affected; would you say as far as 32?—I think the China people are using 26's Bombay, and they are using less 28's/32's on that account.

3435. (*Mr. Fremantle.*) Do you know many instances in which Manchester spinning houses have set up factories in India?—No; I understand Messrs. Greaves and Son have started Bombay mills.

3436. But that emigration, so to speak, of the cotton spinning business, has not largely taken place?—I cannot give you the statistics of the mills in Bombay. They are easily ascertained, but I have not got them with me. I do not know of any firm in Lancashire that have mills in Bombay except that one.

3437. The number of mills in Bombay has largely increased in late years?—Yes, and I understand there are nine mills building in Bombay at the present moment.

3438. When did the establishment of cotton spinning mills in Bombay begin?—I cannot say.

3439. Would it be within the last 20 years?—Oh, no, there were a few before that.

3440. Therefore, you would not attribute it entirely to alterations in the price of silver lately?—Oh, no, by no means, because the first shipment of yarn from India to Hong Kong was sent in 1866.

3441. The first stimulus to the business of spinning cotton in India was given, I presume, by the American War?—Well, great stimulus may have been given at that time.

3442. (*Mr. Houldsworth.*) You said that the trade in Lancashire in 16's, especially to 24's with China had become nearly extinct?—Well, there is not much done in these counts now, although I have heard of a speculative transaction now and again in 16's/24's water to Hong Kong, but the export is very small compared with what it was.

3443. If the exchange now was steady and continued steady, do you think that that trade between Lancashire and China in 16's/24's would revive again, as against the trade from India?—I could not say that of 16's/24's. It is impossible to predict that. It might be that they could beat us with the hold which they have got of recent years, but I have no doubt in my own mind as to the trade in 28's/32's.

3444. That you could recover it?—I think so.

3445. To put it another way, have you any information at all that would enable you to answer the question whether the advantages to the Bombay spinner, apart from exchange, are not so great that Lancashire can never look forward to supplying China again?—My technical knowledge is not sufficient to enable me to answer that; it would require a man who knows the exact cost of spinning in Lancashire and the exact cost of spinning in Bombay by the most approved and best methods in both places to tell that.

3446. But as a merchant could you give any opinion if exchange were steady whether the trade would come back again?—I think a great deal of it would come back if we had a steady exchange. Every other thing would come to work with it. It is the fluctuations which is the severe thing at the present moment.

3447. Is there any other trade between Lancashire and China which has been affected at all in a similar way?—Yes; the trade in 6-lb. T cloths and the trade in common sheetings.

3448. Now where are they made; where does that competition come from?—The competition for the 6-lb. T cloths is from India, and the same reasons, to a large extent, apply to the 6-lb. T cloths that apply to the yarn trade; and I have a small table here showing——

3449. Could you put in a similar statement with regard to the T cloths as you have with regard to the yarns, so as to show the changes in the trade?—I shall do so.

3450. Is there any other thing except the T cloths?—Common sheetings.

3451. I am asking these questions to get at the magnitude of the dislocation?—Yarn is the principal thing. The trade in common T cloths and common sheetings is small.

3452. (*Mr. Barbour.*) Those 6-lb. T cloths and sheetings are made from common cotton?—The yarns used in Lancashire to make them were chiefly American, but in India they can imitate them.

3453. They are articles that can be made from Indian cotton?—They can be, and are, made from Indian cotton. At one time there was a considerable export to China of 6 and 7 lb. T cloths of common qualities made of coarse yarns. This trade has now nearly ceased. Bombay can supply them cheaper than Lancashire under the present exchange conditions. The following table shows how the trade in these cloths has been developing of recent years from Bombay to China. I cannot give the figures for Japan, as they are not stated separately in the India Government Returns.

EXPORTS of Plain Cottons, Bombay to China.

Year 1883–84.	Year 1884–85.	Year 1885–86.	Half Year, 1st April to 30th September 1886.
Yards. 2,147,278	Yards. 2,651,362	Yards. 3,221,817	Yards. 2,022,140 = for year 4,044,280.

3454. (*Mr. Houldsworth.*) Is weaving developing in India?—It is developing.

3455. As rapidly as spinning?—No, not so rapidly; it requires more technical knowledge.

3456. (*Mr. Barbour.*) Do you know whether the greater portion of the trade of the Bombay mills is with China or with India. Is the consumption of Indian spun cotton in India as great as the export?—I could not say. Of course these figures could be ascertained quite easily, but I have not extracted them.

Witness withdrew.

Adjourned till Friday.

Fifteenth Day.

Friday, 4th March 1887.

PRESENT:

THE RIGHT HON. A. J. BALFOUR, M.P., the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
THE RIGHT HON. J. CHAMBERLAIN, M.P.
MR. L. L. COHEN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P.

MR. GEO. H. MURRAY, *Secretary*.

MR. HENRY HUCKS GIBBS was re-called and examined.

Mr. H. H. Gibbs.
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3457. (*The Chairman.*) In your evidence the other day you explained in some detail the evils that arose from the uncertainty of exchange in commercial dealings between gold and silver using countries?—Yes.

3458. And you also, I believe, adverted to the evils which arose from the fact of currency appreciating in value?—Yes; by the diminished production of, and increased demand for, gold.

3459. These are two entirely distinct classes of evils, are they not? And to both of those you think a remedy more or less complete might be given if the system known as bi-metallism was adopted. Is not that your general view?—I should say the evils of the additional uncertainty of exchange produced by the depreciation of silver and the evils produced by the appreciation of gold in gold using countries would be remedied by this measure.

3460. Do you think that we can draw from historical experience any evidence to show that the bi-metallic system is possible and that it does produce that steadiness in exchange which you desire?—Certainly, we can produce evidence that the bi-metallic system is a possible one, we can also produce evidence that it prevents the possibility of such variations of exchange as we have experienced from the cause of the depreciation of silver. The appreciation of gold of course can occur from a vast number of other things, their effect on commodities as well as the effect on gold itself. The depreciation of silver is only the effect of the relations between that particular commodity silver, and gold.

3461. Could you give us a brief account of the bi-metallic arrangements which have been in force in the world during this century?—If you mean to say what the bi-metallic law was and must be, the bi-metallic law is described quite clearly in my article in "The Fortnightly" of October last:—I. An open mint to which every man may take either gold or silver to be coined. II. A fixed ratio which the gold and silver coins are to bear to one another. III. The enactment that the money so coined shall be legal tender to any amount at the option of the payer.

3462. That is your definition of bi-metallism?—That is my definition, and an inevitable corollary from it is, that as in England now every piece of gold is potential money at the will of the holder, so in France, from 1803 onwards, every piece of gold and every piece of silver was potentially, and at the will of the holder, money of the realm. That experience shows that here or elsewhere the enactment of the same law would produce the same effect.

3463. Has that state of things obtained in any country or system of countries during the present century?—In France it obtained from 1803 to 1873. The three points above-mentioned are the gist of the monetary law of 1803. In 1873 the law began to be suspended, that is to say it was made impossible for anyone to take his silver bar to the Mint and at once receive coined money for it. The delivery of coin was at first postponed, and that postponement went on increasing until at last it was wholly suspended, but the law remains the law still in France, only the government has had and has the suspensory power.

3464. The law is in a state of suspended animation at present?—Yes, that is to say that part of the law only which provides the open mint to which everybody can take his silver for coinage. The rest of the law remains good, that is to say that the gold and silver coins are legal tender, and the gold and silver coins bear the ratio of $15\frac{1}{2}$ to 1 to one another; the silver in the one and the gold in the other bear that ratio.

3465. And you may pay your taxes and your debts either in gold or silver as you please?—Yes, as you please.

3466. Were any other countries associated with France during the whole or part of this time in this bi-metallic arrangement?—Yes, the countries forming the Latin Union were intimately associated with France, that is to say Italy, Switzerland, and afterwards Greece and Belgium. Greece came in afterwards if I remember right.

3467. Have you any facts to show that this bi-metallism obtaining over the Latin Union produced that effective stability of exchange which you attribute to it?—Stability in exchange; of course not a fixed rate, exchange can never be fixed, but the exchange so far as the relation between the two metals was concerned was fixed to begin with. Naturally it oscillated as the exchange must always do from other causes.

3468. But the exchange between a silver using and a gold using country did not vary more than the exchange between two gold using countries, or not much more?—Not much more; because bi-metallic France was there to hold the balance. It is quite right to say not much more, because particular causes at particular moments affected it, in the first place a great influx of gold into France had made some difference in it; again a great demand for silver to India had made a difference in it, because those who had to send silver to India had even to collect five-franc pieces and melt them, and send them out. All that would produce a small agio on silver as it might be, or an agio on gold as it might be at another time, but there was what one might call an immutable par of exchange.

3469. Between gold using countries and double standard countries?—Yes, and if you ask further as to gold using countries and silver using countries, the effect of the double standard in France and the Latin Union being this, that there was a fixed point round which the price of silver oscillated (which oscillation was the result of the exchange between the bi-metallic

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country and the gold using country), the price of silver in gold-using countries remained steady.

3470. You have told us that the bi-metallic system was adopted in France about 1803?—Yes.

3471. The Latin Union did not start as early as that, did it?—The Latin Union only started in 1865.

3472. Have you studied any of the monetary facts before the beginning of this century which would either confirm the doctrines which you have just been explaining to us, or the reverse. For example, did not bi-metallism in some form exist before?—Certainly, here in England.

3473. Did that produce the fixed ratio between the value of the metals which has subsisted since 1803?—It is very difficult to say what it did, because the whole monetary arrangements in all the countries were so imperfect. The great evils that we suffered from here were more the evils of either debased coinage in the earlier time or worn coinage in later times, so that either gold or silver departed from the country because the coins in the other metal were degraded in their character by being worn away or filed away.

3474. In fact, by Gresham's law the good coin was driven out?—That would be always so.

3475. But is it not the fact that our coinage was put right about the year 1696 and that subsequently to that we had not to suffer from either of the two evils which you have described, neither from debased coin nor from coin of small weight?—The restoration of the coinage was not quite successful in this respect if I remember right; it is a long while since I read it, but I think the good coin was issued, and the inferior coin remained out in great part, I mean the worn coin. People naturally paid in the worn coin and shipped away the good coin. That they would do.

3476. Then there is nothing in the experience of the last century which would throw any doubt upon the bi-metallic theory?—I do not think there is.

3477. Nor from any other facts that have come under your notice in the monetary history of the world?—I think those causes that have been alleged as militating against the bi-metallic theory are all capable of explanation, either by showing that other causes had led to the banishment of the gold, or by showing that no harm was done thereby to the nation. Of course, it must be admitted that from one cause or another, one metal, gold at one time, silver at another time, will be the prevalent coin in use. It is common to say that in France, for instance, there was no gold; yet there is not a shadow of proof that there was absolutely no gold; and at another time that there was no silver. Most of us remember the time when if you went to Paris, and had to travel into Italy, for a rouleau of gold you had to pay a trifling agio. Another time if you wanted silver for gold you could not get it, but that related not to the whole quantity of gold or silver that might be supposed to be in the country, but to that little floating fringe of gold or silver which serves for such purposes. There was no year, for example, in France during that time of 1870 to 1873 that gold was not taken to the mint for coinage, although the sums so taken, were, of course, smaller than they were wont to be. That is the information I got from the Paris Mint, through Messrs. Rothschilds.

3478. You would admit, would you not, that even on the bi-metallic hypothesis there would be a tendency to drive out the dearer metal from a bi-metallic country into a country where that metal could exchange for what I may, for the sake of argument, call its natural equivalent?—Yes, I think you have just put it rightly. That is, the dearer metal will go to a country where it will purchase more. The common view and the common interpretation of these words, the dearer and the cheaper metal, seems to have been in newspaper writings, the metal that can be produced at the cheapest cost; but that is not at all the case, it is the metal that will buy the most in another country, as is shown entirely by what happened in the United States, where they at one time had a ratio of 15 to 1, the effect of which was that the gold all went away, because one ounce of gold was in France equivalent to 15½ ounces of silver. At another time they had a ratio of 16·002 to 1, and the effect of that was that France having a bi-metallic ratio of 15½ to 1, 15½ ounces of silver exported from the United States and sent to France were there equal in purchasing power to an ounce of gold. The man in the United States, therefore, remained with half an ounce apparently to the good.

3479. People will always take their goods, whether their goods be coin or something else, to the place where they will get most for them?—Certainly.

3480. And, therefore, if owing to legislative arrangements gold was worth less at a certain time in France than it was in Germany the gold would go to Germany?—Certainly; in course of time.

3481. And that fact would, I suppose, be urged by you as a proof, would it not, that legislation can decide what should be the ratio between coins of the different metals within a country?—Certainly. Legislation has done so and can do so.

3482. And the fact that gold was driven out of France at one time and silver at another time, showing that gold at one time and silver at another fetched more out of France than in France, proves that the French legislature did determine the relative value of the two metals in France?—Of course.

3483. (*Mr. Courtney.*) I am not quite sure of what is meant by the relative value of the two metals?—That which would purchase most in any country necessarily goes to that country. In France, by the bi-metallic law 15½ ounces of silver and one ounce of gold had the same purchasing power practically and legally, but it might well be that in another country the one ounce of gold might for a time have a greater purchasing power. In that case the gold would naturally go to where it would purchase most.

3484. (*The Chairman.*) The fact that gold flowed out of France is a proof that that was so. There was no other reason why France should be denuded first of silver and then of gold?—Yes, that is what I would say.

3485. (*Mr. Courtney.*) Do you call that a permanent or an evanescent relation which was established in France?—I should call it a permanent relation in this respect, that everybody was always at liberty to get his bar of silver or gold coined in France, and always at liberty to pay his debts in that which he received for his bars.

3486. Because if the result is as the Chairman suggested, that France might be denuded at one time of one metal, and at another time of the second metal, would you say that the relation subsisted in the country where only one metal survived?—That is entirely a theoretical question, because it was never really true at any moment that France was wholly denuded of gold nor wholly denuded of silver. I have read, lately, that the amount of silver, when you could not get any silver in change without paying for it, exported from France was very small, and the amount remaining in France was very large; therefore, I would say that at no time was either metal absolutely expelled from the country, but I say that the relation cannot be otherwise than permanent when either the 15½ ounces or the one ounce could pay any debt, and when you could always get your coins at your own mint coined in that relation. At this moment you cannot get your coins so coined, but if you have them in your pocket you can pay your debts just as you did before.

3487. (*The Chairman.*) Could you describe the exact method by which this compensatory action, if I may so describe it, operated in a country like France?—I think I must ask what you precisely mean by the compensatory action? Do you mean that which is described by Mr. Jevons when you have a double standard and two metals serving as money. The output of the mines is regulated, that is to say, that there are less variations in the production of the two metals jointly than there are in the production of either one alone.

3488. No, I was not thinking at that moment of the production of mines which you will probably agree with me had a comparatively slow effect?—Extremely slow upon the value of currency.

3489. I was rather thinking of the variations that would occur in the relative prices of the two metals, were it not for the bi-metallic law subsisting in one country?—Your question refers to the price of another metal in a mono-metallic country, does it not, because in the bi-metallic country there is no price at all. I distinguish between agio which is governed by wholly different laws from the question of price of a commodity, as is obviously seen when you perceive that notwithstanding the enormous variations in the production of the two metals the agio never reached an average of more than $1\frac{3}{4}$ centimes on the Napoleon. You cannot call it price in the same country where you can buy your sheep or whatever it is with either the gold or the silver indifferently. Nobody there made a difference, such as you find made, or used to find made in Italy when there was a paper currency, and when there was a number of *Zecchini* still existing in Rome, and a man said "You shall have that thing "for so many scudi, or if you pay me in gold you "shall have it for such and such a smaller sum." That is not what you mean, I suppose.

3490. Let us take a concrete case, say a sheep cost in France 10 Napoleons in gold in 1860, and 10 Napoleons in gold also in 1870. Then you may say with certainty that it also cost 200 francs in 1860, and also 200 francs in 1870?—Certainly. That is you might say 200 gold francs, or 200 silver francs; there was no distinction.

3491. But if there had been no bi metallic law you could not have said such a state of things would have existed with certainty. It might have been worth in 1870 as it was in 1860 10 gold Napoleons, but there was no certainty that it would have been worth 200 francs in 1870 if it was worth 200 francs in 1860?—No relation to it at all.

3492. What I want you to explain to the Commission is how the bi-metallic law produced that permanence in the relative value of the two metals?—I think it is only the action of the law. That Act or that law answers the question, "What is a pound"? I put it in English sterling because of those words of Peel's. People ask, "We have engaged to pay a "pound for so much. What is a pound?" "A "pound is 123·27547 grains of standard gold, or "1893½ grains of standard silver. That is the "answer, that is a pound."

3493. And therefore your opinion is that it is sufficient for a government to say that debts shall be paid indifferently in either of two metals at a certain ratio, for that ratio to be the one for which those metals will always exchange?—I know of no instance where it has not been so, the mint being at the same time open for coinage of both metals. The gold existing in the country may no longer be there for payment to be made in the particular metal. People asked, "What is the price of that"? "So many francs." Nobody said, "Will those francs be gold or silver"? They said, "So many francs." But the question which I thought perhaps you referred to was what was the effect in a mono-metallic country upon the price of the several metals? That is, what was the effect in Germany on the price of gold, what was the effect in England on the price of silver?

3494. But governments have not been able, have they, to regulate the relative value of gold and paper currency where the paper currency has been forced?—Certainly not.

3495. Now, would you explain to the Commission how you would distinguish between the two cases which have a certain superficial resemblance?—Paper currency has no value in any other country at all; it has no value at all, excepting either as representing gold, or as not representing gold; it is a mere forced currency, a saying to the people, "This is your "money of account and you shall use it." If that be the case, and if this is my money of account, and I can use it, I naturally use that for payment of my debts, and I send that which is valuable in other countries away, and use it and get commodities with it which I could not get for the paper. There you remain with a valueless currency representing the credit of the Governmant, but a thing valueless in itself. The silver has not been valueless in itself at all, it is that which is money elsewhere.

3496. There was a time, was there not, in which there was a forced paper currency, and in which the Bank of England note was slightly depreciated?—Yes, a sovereign was worth about 27*s.* in paper, I think.

3497. Well, let us for the sake of convenience say that a 5*l.* note was worth only four sovereigns?—Yes.

3498. At that time was a 5*l.* note not legally equivalent to five sovereigns?—Yes, and I think the House of Commons passed a resolution that a one pound note and a shilling were of equal value with a sovereign, the facts notwithstanding.

3499. And the Government took it in payment of taxation?—I think they did.

3500. And the debtor who owed 100*l.* had his choice whether he would pay in sovereigns or in Bank notes?—Certainly.

3501. There is, therefore, a similarity in that case to the case of a country in which gold and silver are legal tender, and the government accept either metal in payment of taxes, and will consider that any debt which has been paid in either the one or the other has been legally extinguished?—Yes.

3502. And yet there is a difference in your view; because while the action of the government succeeds in the case of the double metallic standard in keeping them at a fixed ratio, the action of the government does not succeed in the case of a paper currency and a gold standard in keeping them at a fixed ratio?—Well, there is this difference between them, that you have the right to take the material to the Mint in the one case, when you have not a right to take your material to the Mint in the other, and if you did you would get nothing for it. If you take your silver you get coins of the realm for it. You do not take paper and get Bank notes for it at your pleasure. One of the three points of the law is wanting.

3503. That observation is true, but is it relative to this particular argument?—What I maintain is that you cannot have the bi-metallic law in existence without those three points that I mentioned before. The forced paper currency of course does not involve one of the three points; it is really the substitution of an arbitrary currency, an enforced currency for a gold currency, although nominally of course a man may pay his debts in the gold that the other is supposed to represent, he never does so. Why should he? The metal is then a commodity like hides or tallow. He buys it when he wants it. The paper is of necessity not a concurrent money with gold. It is an unkept promise to pay gold.

3504. Then in your view free mintage is an absolutely essential element?—Absolutely.

3505. You do not then attach the value which some theorists do to the fact that the Government declare that debts may be paid indifferently in either one of two mediums of exchange?—That is one of the points, only one useless by itself for my argument.

3506. Could you explain to us exactly how you think this free mintage enables the ratio to be maintained. Let me put a case which will show the difficulty that occurs to some people in a strong light. Let us suppose that, through some discovery of a new mine on an enormous scale the supply of silver could be so increased at a small cost of production that its natural value would fall to a quarter of what it is at present. Let us take the country in which there is this free mintage, do you not think that the free mintage, so far from facilitating the government in keeping up this fixed ratio, would rather render that task more difficult; if there was absolutely free mintage of this extremely cheap metal would it not render it harder than ever to maintain the fixed ratio between gold and silver at $15\frac{1}{2}$ to 1?—It seems

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plausible, but it would not be the case. The cheapness of the production seems to have nothing whatever to do with the purchasing power of the money. If a man can produce his silver at 1*s.*, and its value at the mint, that is its value in the purchase of commodities is anywhere certain at 4*s.*, it is so much the better for him, he has made a great profit; the miner has made a great profit, but it makes no difference at all, it seems to me, to anybody else except to the miner. There is a shop always open that is willing to give him a certain number of francs for his silver. That is the thing. So long as there is a shop where so many francs will be given him for his ounce of silver it is quite clear that he will never sell it to anybody else for less.

3507. I quite understand that argument, but let me just remind you of the course of my examination for the last few minutes. I have accepted from you that governments in bi-metallic countries were able to keep a fixed ratio of exchange. You admit that they were not able to keep that fixed ratio when they were dealing with gold and paper instead of with gold and silver. You then told us that the reason why they could in the one case, and could not in the other, maintain that fixed ratio was because in the one case there was free mintage of the silver, and in the other there was not, and obviously could not be, free mintage of the paper. I then pointed out that at first sight free mintage so far from aiding the Government to maintain this ratio would seem, on a certain extreme hypothesis which I described to you, to render it more difficult. You do not feel inclined to withdraw from your position; your free mintage is an essential part of the bi-metallic system if you are able to maintain the ratio?—No, I do not withdraw from that at all. The effect of what you are suggesting is this: As is commonly said, the country would be overwhelmed with silver,—we will take it to be silver. The meaning of "overwhelmed" would simply be that prices would be extremely increased, the mass of the total measure of value composed of gold and silver would be enormously increased, provided always that the gold did not fall off at the same time; the sole and only effect would be the increase of prices, in my view. Whatever overwhelming there might be, of either metal, it would fall with greater force upon mono-metallic countries than upon a group of bi-metallic ones.

3508. Is not the distinction really to be found in this, that in the case in which there is a forced currency running side by side with gold, gold is wanted by those who have to make foreign payments?—Yes.

3509. Whereas, in a truly bi-metallic country it is a matter of perfect indifference to the inhabitants of the country whether they take gold or silver for their purpose?—Yes.

3510. Where there is a forced paper currency there is a certain class of payments which can only be paid in gold, and for these payments the man must provide; and the government is powerless to interfere?—That is, indeed, what I said, only I did not express it so clearly when I said that in the case of the forced paper currency it was useful at home but was useless abroad, that is to say, that the man would send his sovereign abroad because he can buy goods with it, and he would not send his piece of paper abroad because he could not buy anything with it.

3511. (*Mr. Chamberlain.*) He could not send his silver abroad on the hypothesis that it is very much depreciated?—Yes, he could, if there was another bi-metallic country.

3512. To another bi-metallic country, but to a mono-metallic country?—He certainly would not send his silver abroad to a country where gold was the sole standard, because his silver is merely a commodity in that country, not money at all, but simply a commodity; therefore he would no more export silver than he would export wine, if wine was not wanted in the country to which he had to send it; but he could send it where silver was the sole standard, was the money of the country.

3513. He would pay for his importations from the mono-metallic country in gold which he would purchase in his own bi-metallic country, at the fixed ratio with silver?—I do not think that this is exactly what would happen, because there is no question of purchase at all. What would happen is that the man would export from England such and such goods and he would draw for the amount of those goods in francs; they would stand at his credit in francs; no question of gold or silver at all.

3514. (*The Chairman*). But let us take the case of the balance of trade between say England and France?—Yes.

3515. Let us imagine that the causes which you have described to us have driven gold out of France to a great extent?—Yes.

3516. The balance of payment is against France, in other words France has to pay England for goods imported from England more than England has to pay France for goods imported from France, the payment being to a gold standard country must be made in gold, how does France get that gold?—France does not get it because it has not got it to get. It cannot get it. The matter is then regulated by the balance of indebtedness as indicated by exchange, and France must send goods. You cannot send that which you have not. The same question would have arisen with Germany when Germany was a silver country. The balance is against Germany. England being a gold country the money must be sent in gold; how are they to get it? They cannot, and do not get it. What happens is that the exchange rises in that case till the balance of trade is redressed.

3517. The exports from France are stimulated and the balance of trade is paid not in coin but in goods?—Yes. It cannot be paid in coin which does not exist. It may be paid either in goods sent direct to the Creditor country, or by way of trade through other countries which may or may not have gold to send.

3518. (*Mr. Courtney*). But is it not historically true that for a great many years silver was pouring out of France whilst gold was being poured in?—Yes.

3519. That is just the converse of the position put by Mr. Chamberlain. That is the case in which the gold poured in and the silver poured out, expressly in consequence of the bi-metallic law and the fact that gold was being produced relatively much more easily than silver. I mean the period from the time of the gold discoveries onward?—I do not admit that; I do not think that was the case at all. The reason silver poured out of France was that there was an enormous demand for silver for India for the making of railways; at that time silver had to go, and the place of silver must necessarily be taken by gold, as it would naturally be in a bi-metallic country.

3520. But was not the place where silver could then be got most cheaply France, because under the bi-metallic law you could get in France for gold, as long at least as the silver currency was not exhausted, 15½ times its weight in silver?—Yes. France was the natural place to go to for it on that account. It was practically the only place. You could not of course demand the silver; that you could not do. Practically however you somehow got it.

3521. Practically you could carry your gold to France, and since gold there circulated in the ratio of 1 to 15½, you could get your silver out of France at that ratio plus a little cost?—The difficulty, you know, was, that after sweeping up the available bar silver, you had to collect, and pay for collecting, 5 franc pieces, and to sustain the loss of weight between the mint weight and the remedy, and probably a further loss by wear.

3522. But the fact was that many millions did annually pour out?—I think, perhaps, some of those concerned with India would tell you exactly how much did go, but a great many millions went out to India for the purchase of railways. It was not because you could pick up gold cheaper.

3523. Then why is it that people took that gold to France more than anywhere else?—But I suppose they did not do so; I suppose they took their gold to England; that was the first place it came to.

3524. It came to England first, but then the market where that gold could be best disposed of chiefly was France, and France substituted a gold currency for a silver currency, and the silver poured out. These are historical facts?—I demur to that. I demur to your statement of the order of events. The silver poured out, and as a matter of necessity its place had to be supplied with gold. The gold came to the Bank of England. That created a balance of trade so far as the gold went against England, and besides the silver collected in France was collected on English account, and swelled the balance against this country, the gold, therefore, of course had to go out of England; it could not all stay there, because we owed Australia so much, and we owed France so much. I do not suppose any Australian was so extremely good as to send us one million of gold and not expect us to owe one million for it. It was owed, and it had to go where it was most natural that it should go. France had lost and was losing its silver, and the silver was satisfactorily replaced by gold. It was not that France was a bit better off for having the gold.

3525. That was not the point. The point I wished to bring out was that under the operation of the bi-metallic law in France, the natural course of trade led persons who were in possession of this gold in England to carry it over to France, exchange it possibly for commodities there, which commodities were again exchanged for silver, and that silver went in the natural course of trade to the East?—Well, my impression is that it was not so, but I do not know enough about the trade to the East to answer perfectly. I do not think that was the case. Silver was being exported from France, and this created a void in France which had to be filled. England owed France for the silver, and had to pay her. If silver is taken from France you cannot pay that debt in silver. That is obvious. It had to be paid in gold. That is what I think is the cause of the thing.

3526. We may doubt about the causes, but you allow, at all events, these two phenomena to be true, that during the years that followed the gold discoveries gold poured into France and silver poured out?—Yes, certainly.

3527. And that practically the actual currency in use in France was to a large extent transformed from silver to gold?—Yes.

3528. (*The Chairman.*) But you would say that was a necessary and not unbeneficial result of the bi-metallic system?—Certainly. That is to say, that the shipper was able to get a certain sum in silver, which was as profitable to him as the gold was, and the gold was more profitable to France in the purchase of goods abroad and *vice versâ* at different times.

3529. (*Mr. Chamberlain.*) The Chairman put to you an hypothetical case. He supposed that the balance of trade between France and England was against France, and that France, therefore, had to pay to England a considerable sum in gold? Now are there not two ways in which that debt might be met; in the first place the debtors might give a premium for gold in France, and buy the gold which they want to pay in England. If they did that they would destroy the ratio?—Well, I do not admit the destruction; but the facts are as you put them, and you might take a more extreme case than that; let us put this, that supposing in a bi-metallic country gold and silver are equal, that a silver using country, let us say the rulers of China, were to take it into their heads to replace their silver by gold. There is no doubt that then you can imagine a great disturbance in the bi-metallic law, because though the Chinese would have to pay ultimately, if not at first, a very heavy premium for that which they were proposing to do, theoretically they could do it. But in the ordinary course of trade such a thing does not happen, as I showed by the answer I made sometime before. The average amount, although 2 per cent. was paid for perhaps some short portion of a month on two occasions, the real average was $1\frac{3}{4}$ centimes in the Napoleon, so that the ordinary course of trade produced an agio, or may produce an agio, I should rather say, because I doubt on the whole whether there was much agio produced by the course of trade. No one has yet made out the statistics of what amount of silver was purchased with an agio, or what amount of gold was purchased with an agio on the two occasions. It seems to me that as far as regards the gold that was thus obtained, the agio was created because a traveller perhaps wanted to get his rouleau of gold as we have often found it. The traveller was mulcted and the Bank of France gained. The agio, of course besides this affected the exchange with other countries, raising the gold-point.

3530. I have not quite come to my point. What I am putting to you now are really prefatory questions. Going back to the point of the Chairman, the cause of this balance as between France and England. What I put to you last was this, that in order to meet that balance, one way might be for the debtor to buy gold, giving a premium for the gold, in which case the bi-metallic ratio would be disturbed, but I understand you to say that does not happen, and that the alternative which does happen is that the exchange alters, and that goods are sent in order to provide for the balance?—That is so.

3531. Then now comes my question. Is not that saying in other words that the French producer has to accept a lower price for his goods than he otherwise would do in order to provide this balance?—Yes.

3532. And therefore that although there is no alteration in the ratio between gold and silver, the price of goods is depreciated in consequence of the artificial legislation which maintains the ratio between the two metals?—No, I agree to the first part of what you say, but it seems to me that the price of goods is altered by the fact of a debt being due from France to England which has to be paid, which must be paid in meal or in malt. If they have gold wherewith to pay it, that gold by the very fact as compared with commodities is dearer than it was. If they have supplied themselves with too many calicoes, or too much goods from England of any sort, rails or any other things, if they have done that and they have not had wine and French goods enough to sell to us, they must look about for the means of paying us. It is not enough to say that they pay us in gold, that is all right because it is our money. That gold must bear a certain relation to commodities, and that very fact seems to me to show that the gold would become dearer as respects commodities, so that they are not worse off on that account than in the case you speak of.

3533. But if the French producer were able to pay this balance in either metal at a natural price, and not at an artificial price, he would not have to find depreciated goods for the payment?—Yes, I think he would. In any case the metal that he has represents goods. It is metal that he has bought with goods at some former time. It is only another mode of remitting goods. If he is driven to such straits that the ordinary exports from France do not suffice to pay for the imports then as a matter of course without any question of the double standard, goods fall; and goods falling is in other words the gold rising. The gold, therefore, that he sends is something that is of more value to him than it would otherwise be. In either case he loses, and he loses the same.

3534. But is not the position of the French debtor this, that he cannot find gold, because by that hypothesis there is a scarcity of gold in the country to pay his debt to England; he can only find silver at an artificial price above its natural price, and therefore he has to find depreciated goods or goods at a depreciated price. If he could find silver at its natural price the transaction would be balanced without any loss to the producer?—What is the natural price,

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may I ask? I do not mean you to answer, but I put the question.

3535. At the varying price which is governed by comparative production and use of the two metals?—But could anybody say what has been the cost of production of the mass of silver in the world?

3536. (*The Chairman.*) Let us put it in this way. There is no dispute as to the price which prevails in countries where there is no alteration in the relative value of the coins?—Where there is a bi-metallic regulation in any country the price in mono-metallic countries necessarily follows, and it has, and did, and always must follow it. I do not mean to say that it will be exact.

3537. Are you not now dealing with a case where the bi-metallic country is a comparatively small proportion of the commercial world, and where it only regulates it imperfectly on the bi-metallic theory?—Yes, that is to say that so long as France stood alone between a silver mono-metallic country on one side and a gold mono-metallic country on the other side, it was in a much better condition than it was afterwards when it had a gold country on both sides of it.

3538. (*Mr. Chamberlain.*) Is it not the fact that where a bi-metallic country has dealings with a mono-metallic country and is a debtor to the mono-metallic country, the effect of the artificial regulation is to injure the producer in the bi-metallic country?—I think not. Whenever the balance is against a country, whether bi-metallic or otherwise, it is a disadvantage to the remitters; but in the instance that you take he would, I suppose, have at the end of the year to write off a loss, because he has to go into the market and buy goods at a higher price in order to make his remittance.

3539. That is to say, he has to buys goods at a higher price than he can dispose of them for?—I think by your hypothesis he has to dispose of them, because he has to remit them.

3540. He buys them at the market price, but he has to send them to England at a depreciated price, and that is what constitutes his loss?—No, I do not take it to be that. I say he buys them at a higher price, not at what was the market price when he began. He has to go into the market, and by his having to go in and by necessity to buy the goods he raises the price of these goods upon himself. We may take it that the goods in England would fetch their normal price; they are not sent because there is a pressing demand for them.

3541. Owing to what you have said of the alteration of the exchange it is necessary to provide for the balance in other ways?—At present we are talking of his doing it without the question of exchange. As a matter of fact it would be done by exchange. The alternative as spoken of by you is that he might go in and buy more goods and so rectify the exchange, the balance of trade, at his own expense. If instead of that he has the gold by him, he has a sum of gold at his disposal we may suppose that gold by the hypothesis would buy goods at a cheaper rate. If he had not to send them away the gold would be by that hypothesis appreciated in respect of goods. He has to send away that which commands more goods, in other words that which is a loss to him.

3542. (*The Chairman.*) Then leaving that, and turning for one moment to a point touched on some time ago, namely, the power of a country to fix the exchange between the two kinds of currency, I suppose you would admit that debtors and creditors too may in a bi-metallic country by special contract arrange in what metal their debts are to be paid?—Certainly.

3543. (*Mr. Courtney.*) Do you lay that down as a mere question of theoretic economy, or do you mean that it would be practical in the country that the law should allow people to enter into contracts that their debts should be paid in gold or silver?—Oh, certainly; as the law now is, a debt should be paid in gold and gold only, but if anybody says, "I wish to be paid "in cabbages," of course he may. No one can prevent him, nor prevent the buyer from agreeing with him.

3544. No doubt in articles of that kind, but supposing a person contracted a debt now—but this is more a question of law—in pounds, shillings, and pence, and the stipulation was that it was to be paid in silver only, do you think that the person tendering the debt in gold would not be making a legal tender in spite of that stipulation?—As you say, that is a question of law. I should say, as a question of common sense, if a man makes a contract to be paid in silver he would have to be paid in silver. Such a contract would in fact involve two gold-contracts each of which could be enforced. One is a contract to pay gold for the work done; and the other a contract to deliver silver for that amount of gold.

3545. (*The Chairman.*) Then your view, at all events, is that the fixity of ratio between gold and silver in bi-metallic countries is not due to the fact that a debtor can always, irrespective of any special arrangement, pay in the cheaper metal, but to the fact that it is nobody's interest to make these special contracts?—The fixity of ratio is due to the the fact that by law a debtor can cause either metal to be coined at that ratio and can pay his debts in either metal so coined. It is nobody's interest to make special contracts, unless for particular purposes.

3546. Unless for some exceptional purpose, but would that be the case in countries which have partly a forced paper currency, and partly a metallic currency. Would it not be the practice in those countries for it to be stated in every contract in which of the two mediums of exchange the contract was to be paid?—That is the case, or used to be the case, in bills of exchange in Spain. They expressed that you were to be paid *en Oro u Plata*, and not in paper money of any kind.

3547. Now I return to the question which I put to you some time ago. You said that it is possible for a government without any difficulty to itself to fix the ratio between two metals, and it is not in the power of a government, whatever arrangement may be made about legal tender, to fix the ratio between paper money and gold money?—I return to the answer that I gave before, the paper is valueless out of the country; the other is money out of the country.

3548. And therefore, if you could conceive the whole world to be united in the issue of a forced paper currency, you think that a government could fix the ratio between gold and paper?—I do not see at first sight that it would affect them at all, I mean on the hypothesis that it is money somewhere, that the gold is money in some countries and the paper money in others. If, on the second hypothesis that neither gold nor silver is money anywhere, it would be an eccentricity on the part of one government which no other government could interfere with. If all nations had a paper currency and one nation had a bi-metallic currency that would signify nothing.

3549. That is not my hypothesis. You see the difficulty that first strikes the opponents of the bi-metallic theory is this: How comes it to be possible that a government by any legislation can arrange the ratio between the two metals? When that objection is stated to a bi-metallist he gives various reasons which you have very ably stated to this Commission, but then the objector goes on to ask: "How is it if "a government can fix this ratio between the two "metals it is unable to fix the ratio between gold "and paper"?—My answer is that it cannot do the latter because the paper is no use anywhere in fact excepting in his own country. Moreover the relation between commodities, gold and silver, bears no analogy to the relation between a commodity or metal and a promise to deliver that commodity or metal on demand; and that is what paper money is at best.

3550. That is not quite a complete answer. Suppose the whole commercial world were united in the use of a forced paper currency, and a gold currency, the paper currency being issued in excess just as the paper currency of the Bank of England was issued in excess

between 1798 and 1818, would it be possible under those circumstances for the united governments of the world to say that gold and paper shall exchange according to their nominal ratio?—I do not admit the phrase "shall exchange according to their nominal ratio," for there is no question, under a bi-metallic law, of gold and silver exchanging *inter se*. But government can decree that a man may pay his debts in paper or gold; but it cannot be called "fixing a ratio," as in the last question, because the paper is a promise to pay the gold. Even if you call it a ratio of 1 to 1 it must be inoperative, because no ounce of gold would remain in use, and the paper would do the work of money, if all the world were agreed. Of course the thing would be theoretically possible. It would be an infinitely absurd way of carrying on commerce, but if all agreed, and kept their agreement, and there never was any difficulty between them on the subject, I suppose you might have, as Mr. Magniac argued the other day it would be a right thing to have, a vast paper currency legal tender in all commercial nations. "It is true," said he, "that from adherence to old "prejudices it might be well to have some gold to "stand against it, but that would be," he thought, "quite unnecessary."

3551. Now let me leave that branch of the subject, and ask you what in your opinion the effect of an association like the Latin Union is in preserving a fixed ratio between gold and silver in countries which do not belong to the union, mono-metallic countries?—That is to say the effect of the existence of the Latin Union upon Germany as respects gold, upon England as respects silver as they were before 1873. It is not a fixed ratio or a fixed price which is produced, but a par of exchange. What would happen is this; silver comes we will say to England consigned to anybody. How is he to get money for that silver? He goes into the market and offers the silver, and the price is said to be 59*d.* an ounce. "No," he says, "Certainly not; why am I to give "it you for 59*d.* an ounce; I send it over to Paris; "there it is coined into a certain number of francs, "and I draw for that number of francs; I sell "my bill on the market, and I receive English "money." We are, of course, supposing that exchange is about par. That money, then, will necessarily be the amount produced at the exchange of the day by the number of francs that are to my credit with my correspondent in Paris, therefore I get my 60*d.* Well, you may have to ask me further questions, I dare say, but that is the primary action. I may add that nobody did send, or hardly ever did send, their silver to Paris unless it was wanted in France, because the fact of being able to send it was a sufficient answer to anybody who wished to give less than the price corresponding to, or based upon, the ratio in the bi-metallic country.

3552. But if that is a complete account of the affair it does not seem at first sight obvious why the Latin Union found itself incapable of dealing with the difficulties which arose out of the German demonetisation of silver?—I do not see that they were incapable.

3553. They supposed themselves to be incapable?—They evidently supposed themselves to be incapable; but a great number in France thought they were not incapable, a great number at the same time thinking they were, and I suppose the latter was the greater number; but the only effect as I said before of the overwhelming of France with silver would be that silver prices would have risen everywhere. I do not see exactly how your last question hung upon the one before.

3554. I will tell you the relation my last question had to your answer. You said it was not necessary for money to pass, but it was only necessary for people to know that in case of necessity a bill could be drawn?—A shipment could be made, and a bill could be drawn.

3555. Therefore it would seem that it is not necessary to have a large bi-metallic area in order to keep the currency of the world straight?—That was the real effect of the bi-metallic law in France. That was what happened all through those 70 years; you may see that by the price of silver. That fluctuated so very little. It rose, I think, about 2*d.* That rise was when there was a great demand for silver for India; but of course if you are to carry the thing out in theory rather than in practice you would see what would happen; the ultimate result would be that you would send silver to France, and that you would again send it, and again; but even if, as Mr. Courtney said just now, an enormous quantity of silver were produced in the world and continuously being sent, that could not properly be described as overwhelming France at all. It would be indeed a forced import into France, because it is money in France though a commodity here, but the result would only be that these forced imports into France would materially alter the exchange between France and England, and continuously alter the exchange till the exchange rose to that point that the value of the silver in England would be much less than 60*d.* If it was a question only of exchange now, I believe the exchange would have to be 37 francs to the 1*l.* sterling to bring the price of silver down to what it is; but it never would have risen to that point; if silver were sent the result would be merely an excess of imports into France and an alteration of the exchange.

3556. But if through the depreciation of, let us say, silver in mono-metallic countries, the whole of the gold is driven out of a bi-metallic country, that country loses all efficacy as a compensating machine, does it not?—No. That has been said over and over again, but nobody has ever attempted to give me any real proof of the fact, or rather disproof of what I say, that whatever was the case, if there was not a gold snuff box left in France, yet if I sent a bar of silver to the French Mint I could draw upon the number of francs that came to my credit accordingly, and unless the amount of my shipments to Paris and other people's shipments had so turned the balance of trade against France that the exchange had risen, I should say beyond its normal point, I should always get my 60*d.* here in England, my $\frac{60}{240}$ of 1*l.*

3557. Is not the logical conclusion of that theory that it does not matter how small your bi-metallic country may be, and if Switzerland alone was to establish bi-metallism the whole of the rest of the world being mono-metallic, Switzerland would practically regulate the relation between gold and silver in the universe?—As matter of theory it would, as matter of practice it would not, because the balance of trade would be at once and so entirely against Switzerland that there would be no takers of bills on that country.

3558. Then is it not true that when the more valuable metal has been completely driven out of the bi-metallic country, that country loses its efficacy as a compensating machine. You returned a negative answer to that, but it appears to me you would reply in the affirmative?—I say the obscurity lies in the use of the words compensating machine, it would be regulating rather than compensating. It could not lose its power as a regulating machine, because the price of silver in the mono-metallic country in theory would follow the exchange upon a bi-metallic country.

3559. But when from, say, the Canton of Berne, all gold had been driven, would it not be possible for silver to fall indefinitely in relation to gold in every mono-metallic country in the world?—Yes, that is really a *reductio ad absurdum*, because trade would be dead and buried, there would be for the time no trade at all between them.

3560. But by such a proceeding the Canton of Berne would be excluded from the commerce of the world?—No, but I suppose their commerce would for a time come to an end. I do not look at it quite as bringing the controversy to that crucial point.

3561. I chose an extreme case, because it is much easier to argue in theory on extreme cases?—That

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is so. But it is only a theoretical argument, not pretending, I think, to have a practical application.

3562. (*Mr. Courtney.*) Would it solve the whole difficulty and get rid of the whole trouble of Lancashire, India, and other people if we established a bi-metallic law in Jersey?—That is an extreme way of putting it; that is exactly the same as the Chairman's way of putting it.

3563. (*Mr. Cohen.*) Suppose you established a bi-metallic law in Jersey or in Switzerland, that being a bi-metallic country, you would send silver there in order to get gold away from it, but as soon as the resources ceased to afford any gold, then you would no longer send silver there for that purpose?—No, I do not think that in theory that is the case at all. I do not myself see what the existence of gold in the bi-metallic country has to do with the matter. The gold is transferred here in England. Now if there were no gold at all, (I will leave for the moment the extreme case of Berne, or of Jersey, and I will take France,) the existence of gold in France I have always contended does not affect practically the question, because I sell my bill here in England, and the gold that belongs to somebody else is passed to me for that bill, and the silver that is sent to France which entitles me to that gold is only so much additional export from England, and import into France, and it alters to that extent the balance of exports and imports of the two countries.

3564. Independently of what you have spoken of the natural movement of trade between the two countries, there is under a bi-metallic system an exceptional movement caused by a desire to buy or sell one of the two metals. That operation will continue as long as any of the metal in demand remains in the country; but that ceases when there is no gold to be got in the bi-metallic country. When they send silver to get gold that is a distinct operation from the ordinary movement of the metals, which is governed by the state of trade between the two countries?—That is so. If the agents were to send for gold that would be the effect ultimately, as they would have to pay for that gold a vast deal more than it was worth in commodites, because when you came half way through the gold, you would find that the agio, you might call it, but the premium really, the price which at that time in that exceptional case they would take would be enormous. For the amount of gold that they bought they would have to pay double its value. That seems to me to be travelling into another country.

3565. If we had a bi-metallic currency all over the world the temptation to send silver to the one place to exchange it for gold to the other would not exist?—No, not if they were all bi-metallic.

3566. (*The Chairman.*) When a bi-metallic country is denuded absolutely of one of the metals, and is therefore in practice mono-metallic, what advantage is it to the rest of the world that it is theoretically and legally bi-metallic?—My answer is that it is not mono-metallic so long as it will coin *ad libitum* either metal, and so long as one may pay one's debts in either. You ask it at that moment to coin silver; it coins a piece of silver into francs. You are the owner of those francs, and you draw for the amount, and you must be dependent, so far as I see, upon the exchange between the two countries, as I was endeavouring to say just now. I am quite willing to be shown that it is not so, but I have frequently asserted that, and nobody has ever yet taken one single step to show me that it was not so.

3567. (*Mr. Birch.*) You were referring to exchanges. As long as there was gold freely current in France it was as you say; you could sell your bill on France at a gold exchange, but immediately the country became denuded of gold you could not have sold your bill at the same exchange if the balance of trade was against France?—I have said nothing about "a gold exchange," or "the same exchange." I have repeatedly said that the exchange and consequently the price of my silver must, and did in fact, vary with the balance of trade. Can you point to any day in that 70 years on which it was impossible to sell a bill on Paris?

3568. For example, the exchange in 1845 went up to about $2\frac{1}{2}$ per cent. against that country?—I repeat that I have said nothing about a gold exchange, a perpetual gold exchange would of course denote a perpetual price of about 60*d.* an ounce, the exchange was at 25·85 in April in that year; but I could have sold my bill all the same, and the amount of gold I should have received for my silver would have corresponded to that exchange. Accordingly the price of silver here was in that year and month and year as low as $58\frac{7}{8}d.$ In March 1854 the exchange was 24·97½, and the price of silver $61\frac{7}{8}d.$ From 1872 onwards the price of silver ceased to bear any relation to the Paris exchanges.

3569. And was not that because there was a scarcity of gold at that time?—You mean the rise of the exchange was caused by there being no gold. I do not think that is a correct statement of the cause. The failure of French exports to equal the imports was the true cause. Whether those exports are produce of the year's growth, or gold which is stored produce, matters not; the stored produce, being the supplement of the other's deficiency is exported last and is therefore the apparent though not the real regulator of the exchange. The presence of gold in France protects the drawer of bills, and prevents the taker from exacting too high an exchange, but limited by that, the balance of indebtedness, the supply and demand of bills, is the regulator.

3570. (*Mr. Barbour.*) I understand you to say that so long as the exchange does not vary there cannot be a variation in the relative value of gold and silver?—As long as the exchange does not vary from the normal rate, I do not see myself how there could be any variation. I do not see how there could be a permanent variation in the price of silver. I could suppose that there can be a rise in the price of silver notwithstanding, because though the sending your silver to Paris ties you down to the receipt of a certain number of francs; yet, if there is a great demand for India in England you do not send your silver to Paris but where it would be best paid for, therefore there might be a demand for silver irrespective of the bi-metallic country. The bi-metallic country comes in as a regulator to prevent the fall in the price, but I could easily conceive that there might be a demand for India, a demand for this or that purpose, which would send it up, as it did send it up in March 1859 when the price went to $62\frac{3}{4}$, which was rather more than proportionate to the Paris exchange, which was 25.12½. All the silver was exhausted in England. One sent to Paris to get silver, and, as I said before, collected 5 franc pieces, melted them, and sent them out.

3571. (*Sir John Lubbock.*) It can be a regulator as long as a country has got both metals, but take the gradual exhaustion of gold. As long as Switzerland could supply any gold no doubt she has a certain effect in regulating the price, and the ratio of the two metals, but when she was entirely denuded of gold and had no more gold to pay, I do not then see that having nominally a bi-metallic law she would regulate in any way the price?—It is extremely difficult for me when everybody else, quite as competent as I am to form an opinion, disagrees with me. I cannot help suspecting that there must be some flaw in my argument. I do not see it yet, nor has anybody attempted to show me how the absence of gold can prevent your sending silver to Paris and drawing on it, and selling your draft at the exchange of the day.

3572. (*The Chairman.*) I would ask you to consider the extreme case. If you can satisfy your mind that the Canton of Berne could regulate the relative prices of metal for the whole commercial world your theory is without a flaw. I think it is rather a paradoxical position to take up?—Yes; of course my answer would be that for all practical purposes, it is wholly paradoxical; only belonging to the island of Laputa, I mean to extreme theory, which has no real practical

bearing on the case of a great commercial country, still less upon a number of countries agreeing together.

3573. (*Sir John Lubbock.*) But does it matter how large or how small the country is supposing that it is denuded of gold?—Provided there is trade with that country. It is not the supply of gold in that country. So long as there are bills to be drawn upon the country in question, whether Berne or Jersey, or whatever it might be, there would be a price for silver so long as Berne or Jersey will coin your bar of silver into the money of the country (supposing it had a different money), but so long as there is a trade there must be an exchange; so long as there is an exchange you must be able to get English money for your bill. If it is not so, I wonder no one explains what will prevent it.

3574. (*Mr. Barbour.*) Assuming that the production of silver is increasing as compared with gold, and that in consequence silver is being poured into a bi-metallic country, should you admit that there would be a tendency for the gold to leave it?—Certainly.

3575. And supposing that process goes on until at last you arrive at the point at which all the gold leaves, and there is nothing left but silver, and silver is being produced still, will that silver immediately after the gold has gone out still fetch the same value in the bi-metallic country?—It will still fetch the value shown by the exchange.

3576. Will it not then turn the exchange against the bi-metallic country?—Certainly; just as the shipment thither of any other commodities would do; if other commodities have not been at the same time sent hither by France. It is all a question of balance of indebtedness. If silver flows in, and by your hypothesis we may take it as probable that it would pour in, without the shipment of a sufficient quantity of goods to balance it, the exchange will turn against France, there I am with you so far.

3577. If a bi-metallic country will accept all the silver that comes without the exchange being turned against it, it will maintain the ratio, but if there is not a sufficient export from that country then the exchange turns against it?—Certainly.

3578. And the ratio between gold and silver is destroyed?—Not the ratio, the ratio remains the same but the price in the gold-using country alters.

3579. The market price alters?—The market price in the mono-metallic country. That is always what I have said, the market price in the mono-metallic country oscillates round the point fixed by the ratio, in the bi-metallic country, that is to say, if the exchange is in favour of this country then you would get a higher price than the ratio. If in the extreme case suggested by you all the produce of the American mines, and of every other mine in the world, pours in one year upon France the exchange in all probability will turn against France. You must take it that it turns against France, the exchange (as the expression of the balance of indebtedness) being the one thing that regulates the gold price of silver here. That is what I have all along said, but I say it depends on the exchange and not in the least upon the presence of gold in the country (except so far as gold, like anything else, is an exportable commodity and enters into the balance of indebtedness), but upon the exchange.

3580. (*Mr. Courtney.*) I would put it in this way. Supposing Jersey is a bi-metallic country. Every other country in the world is simply a gold country, mono-metallic or gold. Silver comes to be produced with much greater facility, and Jersey being a place which has both gold and silver in use, the silver is taken there and gold either directly or through commodities is got in exchange for it?—Yes.

3581. That can be carried on as long as there is any gold left in Jersey?—Yes.

3582. Suppose you have reached the limit when the gold in Jersey is absolutely exhausted? Theoretically the relation between the gold and silver might still be the same in Jersey, the law might be the same?—Yes.

3583. But inasmuch as there is no gold there, practically the relation would have vanished altogether?—No.

3584. But even when one commodity has ceased to exist?—Certainly not, because the one point that you do not carry in your mind is this, that I have a right to send my bar of silver to Jersey, and they must coin it into pieces of money which bear that ratio to gold. That is what they must do.

3585. Yes, but if there is no gold there for it to bear the ratio to?—To gold; not to a particular piece of gold.

3586. Carry it a step further. Silver is still being produced in great quantities; you cannot get gold for it in Jersey at the rate of 15½ to 1?—Or any rate at all, there is none.

3587. But people want to get rid of it elsewhere?—They send it to Jersey.

3588. They may send it to other places, Jersey cannot get gorged with silver?—Yes, your theory is that it is. You do go on sending it to Jersey because you can get it coined into shillings, or whatever may be supposed to be the money of the country. It is perfectly right so long as you have trade with Jersey, but when you have exhausted the trade, when you can get nothing from Jersey, consequently when you have no more goods to draw from Jersey, you send them no commodities.

3589. (*The Chairman.*) Why do you assume this absolute cessation of commerce with Jersey, because Jersey is bi-metallic?—Because you have brought the exchanges with Jersey to such a point by importing into Jersey more than she can pay for. After you have done that you have no trade with Jersey.

3590. Surely what would immediately happen would be that the silver would go out of Jersey?—Whither?

3591. Follow this reasoning. Silver comes in to Jersey more and more, each piece of silver therefore can buy less of Jersey commodities in Jersey, silver falls in relation to Jersey commodities, and of course it will leave Jersey and go to where it has not fallen in relation to commodities?—But the hypothesis is that all other countries are mono-metallic on gold. Silver is of no value to them.

3592. (*Mr. Courtney.*) But it has value as a commodity?—It has, but what value? It would go probably into the arts.

3593. (*Mr. Chamberlain.*) Is not the result of all this examination that the attempt to preserve this arbitrary relation between the two metals will in the event of an over production of one of them result disastrously for the country that does it?—I am not sure about the disaster. You have shown that Jersey has sold all it had at increasing prices, and has had its production greatly stimulated. The result may not be healthy, but it is only because you have taken Jersey. You have not taken equals with equals, still less have you taken superiors with inferiors. I mean to say we are now only arguing on imaginary cases, which have no practical value. They demonstrate nothing, though they exemplify the working.

3594. You would admit that it might be the case if it were done by a single country, the amount of whose transactions bear a small proportion to that of the general transactions of the world. Your argument is, if it were done by all or a sufficient number, then no such difficulty would arise?—That is exactly what I say. The point we come to is this, that a time has come when there is not an ounce of gold in Jersey, when silver still continues to pour in. Then I say, if there is still any trade in Jersey, if any man wants to remit a bill, has anything to pay to the people in Jersey, then he will buy my bill on St. Heliers.

3595. (*Sir T. Farrer.*) For how much?—For the exchange of the day whatever it is. I do not in the least say what exchange, but I say a point may come when the exchange will go extremely high. It may come that it might be 37 francs Jersey money to the 1*l.* sterling, which will be the equivalent to the present price of silver or thereabouts. Of course that would happen if there is nobody who is willing to buy a bill upon Jersey wherewith to pay for commodities which

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he has had from Jersey. Then this would be the price that he would pay me, the exchange of the day. I only say, as a matter of theory, that it is the exchange that will regulate the price of silver where there is a country willing to coin silver into its own money; or the price of gold, if there is a bi-metallic country that is willing to coin gold into its own money.

3596. (*Mr. Birch.*) But Jersey would hardly serve to illustrate the case; you require a large centre. We will take France. She would coin your silver, and if you sent it there you would have the stock exchange besides commodities for investment; but you might not be able to get gold. If gold was wanted in other parts of the world, the gold might have been drawn out of France, and there would only remain the silver currency?—That would be quite true. It does not answer my point, that whatever the exchange between this country and the other country at that exchange I could get gold for my silver.

3597. (*Sir T. Farrer.*) Is not that lowering the ratio between gold and silver?—It is lowering the price of silver in other countries, which is a different thing.

3598. (*Mr. Birch.*) But you could not get gold if there was no gold in the country?—If I send under any circumstances a piece of silver to Paris to be coined into francs and you yourself have to remit a bill on Paris to pay a debt, why do not you take my bill? If you do take my bill you pay me in gold for it at the rate of exchange of the day.

3599. I pay you here in gold and hitherto you have been able to get gold in Paris. Between 1851 and 1866 the Mint of Paris coined 224,000,000 of gold, and it only coined 13,000,000 of silver, and that shows that gold went there when gold was the cheaper of the two, and silver did not go there?—But that is not the point; I have 1,000 francs to my credit in Paris; I offer a bill for 1,000 francs on the London Exchange, and I want to know why you should not take that bill if you have to pay 1,000 francs to Paris? You answer me that you pay me here in gold, and that hitherto you have been able to get gold in Paris. I do not see what that has to do with it. My point is that, as you say, you pay me here in gold, whether there is gold in Paris or no.

3600–1. (*Mr. Courtney.*) Supposing we start with what we call the conditions of equilibrium, gold and silver existing in Jersey; you can buy Chaumontel pears there at 2*s.* a dozen, silver fetches here 5*s.* an ounce. Those are the two conditions with which we will start. We go on the process which I have already explained by which silver is poured into Jersey until the gold is gradually exhausted. — Silver continues to be poured in, the price of pears goes up from 2*s.* a dozen until it reaches 4*s.* a dozen. Simultaneously the price of silver here falls from 5*s.* an ounce to 2*s.* 6*d.* an ounce?—Do you mean that as a consequence?

3602. Would not they go on simultaneously?—No, not of necessity. It would quite depend upon what the trade with Jersey was. If Chaumontel pears were 4*s.* a dozen the probability is that very much fewer Chaumontel pears would be bought.

3603. There was an equilibrium between the prices of pears and gold, 2*s.* a dozen for pears and 5*s.* an ounce for silver; that was the equilibrium. If you theoretically disturb the price of one you send a demand for the other article, and they oscillate simultaneously, or one after the other, so as to keep under natural conditions of trade the same relative price?—I think that may possibly be if you take the whole traffic of Jersey, which is only another way of stating that the exchange upon Jersey would fall.

3604. That is the point I wished to arrive at. What we should arrive at ultimately would be that prices would be double their nominal amount in Jersey?—That is very likely.

3605. And the exchange between silver and gold would have fallen one half?—Yes, it is probable that it would, but not in Jersey.

3606. Well then I should say is not what you call the maintenance of the ratio between silver and gold a mere phrase?—No, the ratio is not destroyed so long as you can get your bar of silver coined into the money of the country, whatever it is.

3607. (*The Chairman.*) I do not think we can usefully pursue this any further. The question to which we want an answer is this: What is the distinction between Jersey absolutely denuded of gold, but freely coining silver, and India which does not use gold, but freely coins silver? We admit that India coining silver does not keep the exchange straight between gold and silver, and what we want to know is why Jersey doing the same thing does keep the exchange straight? In other words what is the distinction between a silver-using country and a country that would freely coin gold if offered it, but which is practically never offered it?—I think that in such an imaginary case as you suggest there is no practical distinction.

We may leave Jersey out of the question. It was obviously an unreal example, as unreal as it would be on the opposite supposition of a gold-using Jersey standing in the face of a group of bi-metallic States, and depriving them of 600,000,000*l.* or 700,000,000*l.* of gold.

But Jersey has served our turn as an illustration of the way in which a small bi-metallic community might be deprived of its gold (or silver), might have exported all its produce, and might have nothing left wherewith to meet a flood of silver (or gold) poured into it.

I will rather take France as an instance. France denuded of gold is for the moment in the position of a silver-using, silver-coining country. She would indeed coin gold, but by your hypothesis none is offered her.

What, then, is the distinction between her and India, also a silver-using, silver coining country, coining no gold?

France coins her silver at a certain ratio to gold, 25 grammes silver corresponding to gr. 1·6129 gold, and consequently to a definite proportion of the sovereign. There is, therefore, a definite par of exchange between French silver and English gold.

India coins her silver into pieces bearing no legal relation at all to gold, and there is therefore no par of exchange between Indian silver and English gold. But so long as there is a par between French silver and English gold, Indian silver and French silver being the same, the same par must necessarily exist for both.

Therefore while France is bi-metallic the price of silver here will be at least that which corresponds to the Paris exchange, whatever may be the balance of indebtedness between England and India.

But if the bi-metallic law no longer exists in France to hold the balance, the price of silver will be governed by the balance of indebtedness between England and India or other silver using countries.

France indeed besides being, in theory, denuded of all her gold, may, in theory, be inundated with silver, until there be no takers of bills on France.

It might be indifferent then whether the holder of silver sent the metal to India or to France. It would probably be wanted by neither, but being money there, it would be a forced import into either country; and neither French bi-metallism nor anything else would keep up its price in gold-using countries beyond what the exchange between those countries, and France and India respectively would show.

But this whole discussion about the total absence of one metal from a bi-metallic country is unreal, and quite remote from the practical question before us. There is no reality in the suggestion that France would be denuded of all her gold; still less that a group of countries would be so denuded; none in the fear that she could be deluged with silver, still less in the notion that her productive power could be simultaneously destroyed and leave her no exports to set

against her imports, a notion which leaves wholly out of the account the progressive rise of prices in France, the stimulus to production there, and the rise of prices in the gold-using countries.

The practical question is, whether as things now are, when there is no real expectation of the production of hundreds of millions sterling of silver, and when it is certain that the bi-metallic law being re-established in France, silver would be again money or potential money everywhere, it would or would not be advisable to do everything in our power to bring about such a consummation?

I think it would.

3608. (*Sir T. Farrer.*) I should like to ask in addition to that, under such circumstances what is the meaning of the phrase "the ratio is maintained," what is the signification of that? — By this question, and by some words in former questions, I perceive that there is an impression that if in a bi-metallic country there is a premium on gold or silver, so that, for example, 15·7 ounces of silver should be paid for an ounce of gold at one time; and 1 ounce 3 grains of gold for 15½ ounces of silver at another; the ratio of 15½ to 1 established by law has been somehow disturbed.

This is certainly not the case, for one could at either time get either metal coined at that ratio (and no year passed without both metals being so coined in France), one could pay one's debts in either metal, and if one had borrowed 1,000 Napoleons in gold, one could discharge that debt in silver.

This mistake would not be made if people would get into their minds what were the real provisions of the French law, and not evolve out of their own imagination a provision which does not exist in it.

I must repeat that one of the three essential points of that law is, that the debtor has the liberty of paying in which metal he will; and not that the creditor has the right of demanding which he will. Were this latter the case, then indeed the law would break down, and the ratio of 15½ to 1 would be altered, if notwithstanding this right the debtor could mulct his creditor, against his will, of so many centimes in the gold 20 franc piece, or in the silver 5 franc piece. For then the right conferred by the law would have been taken away.

But where, for his own convenience, the creditor voluntarily pays the debtor so many centimes to induce him to forego a right which still exists, and on which he *ipso facto* insists, the law is *not* broken; nor can it be said that the ratio fixed by the law is in any way disturbed by a separate bargain which recognises its existence.

3609. (*The Chairman.*) Then to go to the practical deduction from this, you would regard it as only of diplomatic value to have a very large bi-metallic area in the world?—No, rather more than a diplomatic value, because I have never doubted that if you have a country like France alone acting as a bi-metallic country with a large multitude of others drawing upon it continually, then you may have that which will be an inconvenience, you may theoretically have an enormous quantity of one of the metals poured in, which, as in the case of France when it received all that quantity of gold, would raise gold prices, and banish the other metal, but the country will not feel that which Mr. Giffen once described as misery, because in point of fact it is making a great gain in one part, and if it makes a loss in others, they balance.

3610. I now want to put an extreme case before you which is sometimes raised as an objection to bi-metallism. Let us assume the best circumstances that any bi-metallist can hope for, namely, that practically the whole commercial world were joined in a common bi-metallic system at a common ratio, and let us suppose that in one of the metals enormous mines that can be very cheaply worked are discovered. Would not the result of that be that the metal which could thus be cheaply produced will be produced in very large quantities, and the total currency, gold and silver taken together, because they are tied together by hypothesis, would depreciate?—Yes, certainly.

3611. The fact that they depreciated would cause the mines in the metal in which the discoveries were not made, which we will call gold, the less productive mines, to be unworked. The result of that would be that the more silver was poured on the market the less gold could be poured on the market, and if it be an evil to have one metal in excess, that evil would be aggravated and not diminished by the bi-metallic system, in other words the price of silver would be artificially kept up, the price of gold would be artificially lowered. By the first of those operations the production of silver would be artificially stimulated, and by the second the production of gold would be artificially checked, and the result of that would be that there would be no reason why it should ever stop until gold was entirely excluded from the productive industries of the world, and we should simply use gold as long as the gold already in existence lasted, so we should practically become a mono-metallic world using silver alone?—Of course if I must accept the hypothesis that gold would cease to be produced altogether, you must add that silver would be produced in sufficient quantities to serve for the measure of value in the world. What you suggest would no doubt happen. Whether there would be any tremendous mischief in it so happening is another matter. John Locke would have thought it the most fortunate thing that could have happened, because he thought that if one metal alone was to serve as the measure of value, silver was far the best, and for the reason, as it appeared to him, that silver was one that was produced with more regularity than gold.

3612. It is unlikely that it should happen, but if it did happen it would not be a very serious evil?—It would not be a very serious evil; and it must be borne in mind that however great the evil produced by such an influx of silver into the currency of the associated nations, it would be much greater if it poured into a single silver-using country. The Commission may measure it by the great influx of gold into England since 1853! The question could only be of practical importance if it were apprehended that the production of silver had been checked by the low price, and could be resumed in excessive quantity. I have great reason to doubt whether there is any such check to the production of silver, since silver has gone down in price; because as far as I can gather from other people's account of it, and what little I know myself upon the subject, the mines are always good enough to produce more than the present price of silver, and people do not wait, miners of all others do not wait for other years, but they go on producing, even when they are producing nothing, much more when they are producing something. We know as a matter of fact that the output of silver has largely increased of late years.

3613. (*Mr. Courtney.*) You would start beyond that point. If you made the ratio one to two you would extremely enlarge the circulation of the world, would you not?—Yes, enormously.

3614. If you took all the silver that exists and made every two ounces instead of 15½ or 18, or whatever it is now, equal to one of gold, would you not cause a tremendous rise of prices everywhere? That is the same thing as would follow the hypothesis of the Chairman, the immense production of silver mines?—Yes, but there is the compensating action of the departure of gold in his view, and it must be gradual.

3615. (*The Chairman.*) Of course, if you made silver artificially only half as valuable as gold not a single ounce of gold would be produced?—You could not help producing it, because if you kicked a nugget you would pick it up, but no mines would be worked.

3616. (*Mr. Courtney.*) It would be produced as diamonds are produced?—Yes; only one seldom stumbles over a diamond.

3617. (*The Chairman.*) One question of a more general kind. You explained at some length in your

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evidence the other day the evils that you thought followed from the variation of exchange, and from the appreciation of the currency. Is your view that the healthy state of a currency is one which naturally expands as population and commerce expand?—Yes; when that is the case, commerce is kept in a good groove, it is shunted out of it otherwise.

3618. If the supply of the precious metals remains constant, if at the same time there is no increase of what we have called banking facilities, and at the same time population and commerce increase, of course you have an era of falling prices?—Yes.

3619. You regard that as great discouragement to enterprise?—It is an impediment to enterprise, I think.

3620. A great burden upon those who have fixed charges of long-standing debts?—It is a burden upon those who have to pay. It is a burden, I may add, upon those who are making contracts if it is to be a continuous fall.

3621. A great burden on nations which have national debts?—Certainly.

3622. And corporations which have municipal debts?—Yes, and upon mortgagors who have to pay the interest on their mortgages.

3623. There is no doubt that in all probability the commerce of the world and the population of the world must go on increasing in the future as it has in the past?—Yes.

3624. And you would, therefore, think it the duty of those who desire to put the currency on a sound basis to do what they can to make that currency elastic to meet the new requirements that are certain to come upon it?—Yes.

3625. And you are of opinion that the bi-metallic system which brings in silver to the assistance of gold in commerce is the best way of carrying out that?—Yes. When I say the best way, of course there are other ways that may help it.

3626. And for those reasons as well as in order to obtain that certainty in the ratio of exchange between silver and gold using countries, you are anxious to see some arrangement come to between the civilised nations for adopting the bi-metallic system?—That is what I want to see.

3627. Have you any view as to what the ratio ought to be?—Yes; I have a very strong view upon that. It is that inasmuch as I should desire that the matter should be made one of arrangement with other powers, and that I think it extremely desirable that an attempt should be made to do that, it seems to me unlikely that the French or German should be willing to enter into an agreement for any other ratio than that of $15\frac{1}{2}$ to 1, because that is the ratio now prevailing in Germany and in France, the ratio at which a very large quantity of coined money is current; and if it be said, as of course it would be said, "Why should "we English depart from what is shown by the "present price? That would seem to be the real ratio "to choose." My answer to that is that the present price is the price of silver when the demand for silver is in part destroyed. The one great demand for silver was that for coinage. There is a great deal of coined silver lying in the United States Treasury that is not serving the purpose of the measure of value, and there is much in Europe that is in the same case, and there is much yet in the mines in the same case, therefore, I think that if silver were brought back to its old position either by reverting to the *status quo ante* 1873, or if it was done by a bi-metallic agreement, between the Latin Union, the United States, Germany, Holland, Belgium, and England, I think that then it would be found that $15\frac{1}{2}$ to 1 was as near the correct ratio as you could get. There never was an exact ratio, of course, because no one could possibly tell either what the amount of silver and the amount of gold existing in the world was, nor what their relative cost of production had been.

3628. Then, as I understand it, you have two reasons for preferring a ratio of $15\frac{1}{2}$ to 1, one, a diplomatic reason that it would be the easiest ratio to induce other nations to accept; and the second, that if silver were rehabilitated in other countries where it is now excluded from the currency, as far as we can guess, $15\frac{1}{2}$ to 1 would be approximately the natural rate of exchange between it and gold?—I would say rather as near as ever it was.

3629. (*Mr. Fremantle.*) The adoption of the ratio $15\frac{1}{2}$ to 1 would necessitate, would it not, the re-coinage of the silver currencies of this country and of the United States and other countries too?—I will not tell you about other countries, because I cannot answer, but certainly not one single coin here. Our coins, as you know better than anybody, are tokens. The shilling, which is a token for the 20th part of 1*l.* sterling, would remain.

3630. But in America where the silver dollar is standard coinage?—Well they are at 16 to 1. There would be a trifling difference in America, but they are, as we well know, willing to run that risk. They have already altered their ratio three times without method; that is, without considering its accordance with that adopted by other nations.

3631. (*The Chairman.*) You contemplate having two sets of coins current at the same time, one of a standard fineness, and the other of what I might describe as a token fineness?—No, certainly not two sets, there would be a standard coin of the realm which would be a double florin I presume, and all the rest token.

3632. (*Mr. Fremantle.*) Will it not be necessary therefore to call in the whole or nearly the whole of the present silver coinage of the country?—I cannot in the least imagine why. The double florin of full weight, so far as it was used at all for internal purposes, would replace gold more than tokens. There might be a few less tokens coined, but very few.

3633. (*The Chairman.*) Your view is that we should have three kinds of coin in existence, gold coin as it is at present, a silver token coinage as it is at present, and in addition to that, a new silver coin of standard fineness?—Certainly.

3634. And weight?—And weight, exactly the same as the French system.

3635. Under the system you propose would you have as at present all debts to be liquidated in token coinage up to 40*s.*?—Oh, yes, certainly.

3636. (*Mr. Birch.*) Not more?—That enters into quite another question, that is to say how far it would be as possible as it would be desirable to induce other nations to adopt the bi-metallic system without our doing so. That was attempted to be done in 1881, on a suggestion of the minister of the United States, a suggestion that was adopted also by the Italian Government. Their proposal was in the first place that the Bank of England should issue upon silver in accordance with the Act of 1844, that is up to one-fifth part of the total amount of bullion, which would be one-quarter part of the gold, and that the token coinage should be legal tender up to 5*l.*

3637. (*Mr. Fremantle.*) My question was whether it would not be necessary to withdraw a quantity of the present silver coinage?—I say not a shilling, except so far as the 4*s.* piece might be demanded for the same purposes as the tokens are. Crowns are rarely used, and so would double florins be.

3638. Then you would maintain the whole of the present token coinage and the new silver coinage besides in addition to the gold?—Yes, certainly, so far as it might be demanded.

3639. (*Mr. Cohen.*) The new silver coinage being an unlimited tender and the old up to 40*s.*?—That is the assumption. But let me say there would not really be a permanent addition, if there was a temporary addition. We coin token coins only when the public want them. As they were gradually brought in and melted they might possibly, and for a short time, slacken the demand for token coinage.

3640. (*Mr. Fremantle.*) That is exactly what I wanted to know. Now you say the new silver standard coinage would replace the token coinage?—In a small degree, possibly. What I understood you

to mean, and I may have been wrong there, was that the token coinage as token coinage would have to be recoined.

3641. (*Mr. Cohen.*) Would you continue to coin token coinage under the new system?—Oh, yes, certainly; the French did not do so immediately on the passing of the law of 1803. Their subsidiary coins were francs, double francs and 50 centime pieces of 900 fine; then at a later period they reduced them to 835 fine.

3642. (*Mr. Fremantle.*) At the time of the Convention of 1865, I think?—Yes, it was in 1865.

Witness withdrew.

Adjourned.

Sixteenth Day.

Tuesday, 26th April 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. HENRY CHAPLIN, M.P.
MR. L. COURTNEY, M.P.
SIR T. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P., and
MR. GEO. H. MURRAY, *Secretary.*

MR. HENRY HUCKS GIBBS, re-called and examined.

3643. (*Mr. Barbour.*) I think you are of opinion that the present state of the gold and silver question is a burden on the people of India, as well as on the Government of India?—Yes, I should say so.

3644. Would you like to make any remarks as to how that is the case?—I do not feel disposed to say much about that, because I have so little personal acquaintance with Indian matters. All I would say is that we know there is a considerable loss in the Indian finance on the remittances that have to be made home, and that as regards the people of India, although there may be, for the moment, an alleviation of that loss, yet somehow or another, the loss that the Government suffers must necessarily fall ultimately upon them.

3645. Have you had any experience of countries where there is an excess issue of inconvertible paper?—Yes; that is, I have knowledge of the facts. In Chili that is the present case.

3646. And what is the standard for all ordinary transactions in such countries, is it paper, or is it coin?—If the paper is inconvertible, and if, as is quite certain to be the case, it is issued in excess, then the coin will vanish; I do not mean that all the coin will leave the country, but the ordinary transactions will be carried on by means of paper and not coin; and the metal having been displaced, the paper may be considered in one sense the standard.

3647. Then I understand that in such a case, wages, fares, freights, and taxes would be ordinarily reckoned with reference to the paper money, and fixed in paper money?—Certainly.

3648. But if the debtor, instead of paying paper, was willing to pay gold or silver, the creditor would take it at a premium?—I suppose that would be matter of arrangement between the debtor and the creditor. If it suited the debtor to pay, and if it suited the creditor to receive, in metal, he would do so. Probably it would suit the debtor only if he got something by it.

3649. What I mean is this, that transactions are not entered into on a basis of coin, and payment made in paper at a discount; they are entered into with reference to paper, and if payment is made in coin you get a premium on the coin?—I do not know whether that is exactly the fact, because probably people would speak of the paper as being at a discount; but as matter of fact the coin would become a commodity which would be dealt in in terms of paper.

3650. (*Mr. Fremantle.*) Then the contracts are made in paper?—Yes, practically all transactions are regulated with reference to paper.

3651. (*Mr. Barbour.*) Some of the witnesses who have been examined before this Commission, have held that the Bombay cotton spinner has gained in his competition with the Lancashire spinner by the fall in exchange, though they have not agreed as to the exact value of the gain. With reference to this question it has been urged that, whatever the gain may be, it would be unfair to deprive the Bombay spinner of it by altering the ratio between gold and silver; have you any remarks to make on that aspect of the question?—A question seems to arise how the change has been caused. If legislation has caused it, legislation naturally might remove it if it was for the good of the country at large that it should be removed. I may say further that if it is for the good of English commerce that it should be removed, I think it would be right that that should be done. I have heard people say that it is due to natural causes; I do not know quite what is meant by natural causes. If it is meant that a great increase, for example, of silver produced at the mines has caused the depreciation of that metal, that is a natural cause. I do not think it would have been at all necessary or likely that we should have taken any steps in that case, because nothing would have happened to England at all. Silver-using countries would have found their measure of value increased, and prices would have risen. Nothing would have happened to us. I do not think it would have awakened anybody's susceptibilities at all in this country. People in silver-using countries might have complained just as people in gold-using countries complained between 1853 and onwards when a great quantity of gold was poured in. They said, "Gold will be so frightfully depreciated that the best thing would be to give up gold altogether." Then, if the cause, the natural cause that is spoken of, is the action of Germany in demonetizing silver, I do not think that can be called a natural cause at all. It is not more natural to have gold than it is to have silver; it is not more natural to have gold or silver, than to have gold and silver as one's coin. It is a matter which has grown up partly by custom, and partly by legislation; what would have happened in that case? The silver-using countries would have found their measure of value increased by the outflow of silver from Germany, and naturally the gold-using countries would have found their measure of value decreased by the drain from them of all the gold that was wanted by Germany, but nothing of very great importance would have happened to us, excepting the fall of prices here and the rise of prices there. There was another thing that did happen, and that was the action of France, which was as little natural as could be. They chose to do away with their old double standard, which had been our old double standard before. It was purely an arbitrary action on

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their part, just as the taking of gold alone as our standard in 1816 was an arbitrary action, and what it did was not only to affect prices, it affected a much more important matter; it did away with that which had existed up to that time, the immutable par of exchange between silver and gold. Therefore, to answer your question exactly, I think that if anything happens, from whatever cause, whether it be natural or other, but much more if it be from legislative action, if anything happens which is hurtful to us, it is quite reasonable that we should remedy it without considering whether somebody else is temporarily prejudiced. because as regards the gain to the Indian producer, I think it is only a temporary gain, and as regards the loss to ourselves, and the danger to ourselves, I think it is a continuous danger. Even if it were not, even if the loss were decidedly great to India and the gain to us were great, or if the present loss to us were great and the gain to India considerable, I should prefer England to India for my part.

3652. (*The Chairman.*) When you say legislation are you referring to English legislation or the legislation of any other country?—I was referring to the legislation primarily of Germany and secondly of the Latin Union, but I may also add that English legislation was concerned too, because English legislation in 1816 made a very considerable change; and foreign legislation was based on English example and precept, as in the Bullion Report of 1810, and in the suggestions of the Chancellor of the Exchequer in 1869.

3653. (*Mr. Barbour.*) I understand you to hold the opinion that the advantage to the Bombay spinner, if there is any, is only temporary?—Only temporary, because, as I explained before, the advantage is gained in this way, that the wages that are paid, and the price of necessaries of life, are paid in the depreciated currency. That is to say, that the same amount of wages is paid in depreciated currency as was paid before the currency was depreciated; and I think it would be only temporary because the natural consequence of it is that the gold value of the produce is on the road to diminish, does diminish, and continues to diminish, but has not as yet, at least as regards Chili, diminished to the same extent, though it is going on to do so.

3654. (*The Chairman*). Then if the gain to the Bombay spinner is only temporary our loss from that cause must be only temporary too, must it not?—Our loss so far as it goes as to fall of prices certainly, but not as to the taking away of the common measure between the two countries.

3655. I was alluding to the evidence given that our trade was being diminished because of the advantage that the Bombay spinners had; so far as that cause of mischief to our trade goes if the advantage is only temporary our disadvantage must be only temporary?—Yes, certainly, with this difference that you have started the Bombay spinner with his mills, and he is quite certain to go on for a long time even though the gain that he has hitherto made be not continued.

3656. (*Mr. Birch.*) Then he would be working at a loss instead of working at a profit?—He would, but it is none the less a loss to us.

3657. (*Mr. Barbour.*) Then we have come to this, that the gain to the Bombay spinner, if there is any, is only temporary, and the loss to the English spinner, if there is any, is only temporary?—Yes.

3658. Is it not possible that, whether England acts or not, the rate of exchange might rise, and in that case, assuming it for the sake of argument, would not the reverse operation take place, and the Bombay spinner begin to lose, while the English spinner began to gain?—Certainly.

3659. Then is it your opinion that it is desirable to put an end to a state of affairs under which industries in a silver country may sometimes be temporarily protected against industries in gold countries, and on the other hand and at other times industries in gold countries may sometimes be protected against those in silver countries; and to establish a system under which no industry shall, owing to the operation of currency laws, receive practical protection against any other industry?—Yes.

3660. The Bombay spinner is supposed to get an advantage now, and the English spinner to suffer a loss. If exchange rises it will be the reverse; Bombay will suffer a loss, and the English spinner will gain. Is it not desirable, if possible, to establish a system under which there shall be none of these fluctuations, neither loss at one time, nor gain at another, owing to the alteration of the ratio of exchange between gold and silver?—Yes, certainly desirable if it is possible to do so, that there shall be no fluctuations from that cause. From other causes there will always be fluctuations, but that cause ceases so soon as you have a fixed ratio between gold and silver.

3661. Will you refer now to Question 3611? The Chairman, who was examining you, said: "The price "of silver would be artificially kept up, the price of "gold would be artificially lowered, the production of "silver would be artificially stimulated, and the "production of gold would be artificially checked." Is the answer that you gave to him entirely satisfactory to you, or do you wish to add anything to it?—It is not entirely a satisfactory answer that I gave, because I am not sure that I fully apprehended the question. By price in what you have quoted, I presume was meant value as measured in commodities. If so, the case was rightly stated in Question 3610—the more silver was discovered and produced, the more would the two metals, silver and gold, in their proportion (that is the whole mass taken together) be depreciated as compared with the commodities they measure. That depreciation means that labour and everything else which goes to the cost of their production would rise in price, and that those mines, not of gold only, but of silver as well as gold, whose cost of production was thus increased beyond the value of the metal produced would cease to be worked. It is no doubt conceivable that the supposed new discoveries of silver would shut up all existing silver mines and all gold mines, and that a thousand years might see the end by wear and tear of the gold accumulated during the past ages of the world; but such speculations have no real relation to the practical question before us, and if that which they suggest could practically happen, it would have much more powerful and far-reaching effect upon mono-metallic States than it could upon those subject to the compensating influence of bi-metallic law. But I think that the words which you have quoted from the Chairman's question mean that while gold became difficult of production and scarce, and silver easy of production and plentiful, the maintenance of the relation of $15\frac{1}{2}$ to one would be an artificial exaltation of silver, and an artificial depression of gold. If so, my answer is that, as regards the measure of value of commodities, the scarceness of the one and the abundance of the other in no wise affect it. The quantity of both together is what affects it. As an addition to that quantity the discovery of one ounce of gold is exactly the same as the discovery of $15\frac{1}{2}$ ounces of silver, if that be the ratio borne by one to the other as money. Take away from them their character of money, their quality as a measure, and they would find each its own level as measured in the money of the future whatever it might be. Take away from one of them that character, and it would find its level as measured in the other according to the natural laws of supply and demand; and this is what has now in part happened to silver.

3662. Besides the effects touched on in the above question, apprehensions are sometimes expressed that a great production of one or other metal would cause great disturbance to commerce, and that these disturbances would be aggravated by bi-metallism. Do you agree with that?—No, I think that as regards the latter part of the question that is wholly erroneous. The disturbance under a bi-metallic system would be less than under a mono-metallic system. I know that Mr. Mill seems to say that under a bi-metallic law the disturbance would be greater, but I think Mr. Mill has been misunderstood. Mr. Jevons has proved

it in one way, my late colleague Mr. Hunt proved it in another, and I can prove it in a third. Let me suppose two communities, A. and B. (which may stand for the whole commercial world), each employing 10,000,000*l.* sterling as money. I will first consider them as mono-metallic; A. using gold, and B. silver. (1.) If in any year 1,000,000*l.* more gold is produced than suffices to provide for wear and tear, and the natural increase of population, the measure of value in A. is increased by 10 per cent., and prices, so far as that affects them, increase in like proportion. (2.) If in any year gold remains constant, but 1,000,000*l.* more silver is produced than is required for the objects above stated, the measure of value, and consequently the prices of commodities in B., are increased 10 per cent. (3.) If both gold and silver are produced in the same excess, prices are *pro tanto* raised 10 per cent. in both A. and B. (4.) If 1,000,000*l.* less of either metal is produced than is needed for wear and tear and increase of population the opposite result is obtained, and prices are lowered 10 per cent. in A. or B., or both as the case may be. (5.) If one metal be produced in excess and the other falls off by the same amount, 1,000,000*l.*, the same disturbance takes place. Prices rise 10 per cent. in one community and fall 10 per cent. in the other. There is no compensatory action, no direct compensatory action, I think I should add. I will now consider the two communities as bi-metallic, A. and B. using 20,000,000*l.* between them, half gold, half silver. (1.) It is obvious that in this case the excess of 1,000,000*l.* gold will increase the measure of value, and consequently prices, 5 per cent. (2.) And that the like excess of silver would have exactly the same effect, 5 per cent. (3.) While the simultaneous excess of a million of both gold and silver would cause an increase of 10 per cent. (4.) The opposite result of a fall of price of 5 per cent. in two cases, and of 10 per cent. in one, would be caused by the production being in defect instead of in excess. (5.) But in the supposed case of abnormal increase of one metal and abnormal deficiency of the other to a like amount, no disturbance whatever is caused to the bi-metallic communities. Thus, in two cases out of three, where any disturbance takes place in a bi-metallic country, it is half the amount of the disturbance which is caused in the mono-metallic country affected by the supposed excess or defect of production; and in the third case the disturbance is the same in both the mono-metallic and bi-metallic communities. But a fourth case occurs (5) in which the disturbance in the two mono-metallic communities is 10 per cent., and in the two bi-metallic communities nothing at all.

3663. (*The Chairman.*) Are you supposing the bi-metallic system to prevail in one country only, or to be universal?—I suppose it to be sufficiently universal, if I may use such a phrase, to make it secure, but that really does not touch the question here, because the only point is, what is the effect upon a bi-metallic nation, as contra-distinguished from the effect upon a mono-metallic nation.

3664. (*Mr. Chaplin.*) When you talk about a sufficient number of countries to make it secure, how many does that mean?—France and the Latin Union were in my opinion quite sufficient to make it secure; but it was not the opinion I suppose of the majority of the ruling people in France, because they stopped it; but I think it would have been sufficient. If there had been two nations, Germany and France together, *a fortiori* it would have been secure; the security would be doubled. If there were the United States as well, perhaps it would be quadrupled or quintupled, one cannot say, but the greater the number, the greater, in an increasing ratio, the improbability of their suffering any inconvenience at all.

3665. Would you say that either Germany and France, or either one of those countries and the United States, would be sufficient in your opinion to make it secure?—I believe it would.

3666. (*The Chairman.*) Do you mean then that it would not matter whether we were bi-metallic or mono-metallic?—I have great difficulty in giving a confident answer to that question. I have said often, and I am inclined to think, that it would make no difference to us, that if we could return to the position of affairs before 1873 it would be all that we could desire; but I know that there are some in Germany who think that by all means they should leave England out of the question, because it will be very much better for them that she should be so left, and very much worse for England; and there are some here who think that it would be a great misfortune to us that we should be left out, and should remain mono-metallic, in face of a bi-metallic union. I have never supposed that it would be more than an additional bond to the Convention that we should be in.

3667. (*Mr. Houldsworth.*) In reading the very important evidence you gave last time in reference to Jersey, I found some difficulty, and I want to clear it up. Do you hold that if bi-metallism at a fixed ratio were established in one small country it would produce any effect in the world in maintaining the standard level?—I do not think that is really a practical question. It depends entirely upon the size of the commerce of the nation whether it would have any or none effect. Its coming to have none effect would be of course owing to the destruction or the exhaustion of the producing power of that country.

3668. It would answer my question if you said that in the case of such a small country as Jersey it probably would have no effect?—It would have no practical effect.

3669. (*Mr. Barbour.*) Do you think there would be any practical difficulty in coming to an agreement with foreign governments to have a fixed ratio between gold and silver?—I do not. I have good reason to think that there is none at all. The United States has been continually striving for that agreement. When I was in Paris in 1878 the Frenchmen who were concerned made no secret of their wish that the Convention should be come to. That was the case with other countries, not with all of them, some of the minor countries did not wish it. Germany has all along said that they would be perfectly willing provided we were willing. Germany has put it always upon that.

3670. Do you think that even if an agreement was made, there would be any danger of any nation breaking it?—Well, I have shown, I think, in that article in the *Fortnightly Review* how extremely difficult it would be for any nation to break through it, and if they did break through it it would be for their misfortune rather than for their gain. It is at page 493.

"Any Government might no doubt withdraw from a bi-metallic treaty if only it could be shown that it was its interest to do so. It could indeed in three ways cease to be an active member of the confederation.

"1. It could suspend cash payments and issue a forced currency. This would be no withdrawal; the machinery would be in working order and the law intact; but when once the paper had become depreciated, and had practically driven out the specie, no one would pay in specie, and no one would bring gold or silver to the Mint. Its gold and silver would have flowed over into the other nations, bi-metallic and mono-metallic, and increased the metallic circulation of the rest of the world. But it would have had no other effect on the union, inasmuch as it would have ceased to exist as a metal-using nation. It could take the same step now, whether it was bi-metallic, mono-metallic gold, or mono-metallic silver, and with precisely the same kind of effect on other nations.

"2. It could do as France has done—suspend the coinage of one of the metals. But it could not have the same inducement, because, while France stood alone, the nation in the case supposed would be one amongst many, and could have no fear of becoming the receptacle of either metal to the exclusion of the other.

"3. It could do as Germany has done, refuse bi-metallism, and proceed to the sale of one of the metals. It seems very doubtful whether the sale

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would be possible; for, on the hypothesis that the other principal nations were in the union, there would be no market. Neither silver nor gold could be *sold* to a bi-metallic nation, and could only be remitted without loss if the balance of trade demanded specie remittances. But, supposing that it could be done, the result would be a frightful contraction of the currency in the country so acting. It is not always that there is a war indemnity to fill the gap. These two last operations would have been real withdrawals.

Those, therefore, who think that such a union could not be maintained should, I think, eschew general assertion, and be prepared to show, step by step, what circumstances could make any particular nation discontented with it; and, step by step, the course such a nation could take to free itself from it; and, finally, and with the same detail, what would be the consequence to that nation and to the others."

3671. I suppose the strongest guarantee for the maintenance of the agreement is the fact that it would not be to the advantage of any nation to depart from it?—That is so.

3672. And I suppose the experience we have had since 1873 shows that it is not as a rule an advantage to a nation to attempt to change its standard?—Certainly not. The demonetization of silver has been a very great loss to Germany, and so must demonetization always be to any nation.

3673. And most of the nations that stopped the coinage of silver, at any rate America and France, and probably Germany, appear to have been anxious to go back again?—They have certainly shown their anxiety to go back again.

3674. (*Sir T. Farrer.*) The impression given by Mr. Strachey's recent report is that the Germans do not wish to go back?—It just depends on who the persons are who are consulted on that point. I was told by a very good authority that the agricultural part of the population in Germany were to a man anxious for the adoption of the bi-metallic standard; that the bankers and merchants were for the most part not anxious to do so. There are very considerable exceptions to that rule as regards the bankers, and in France the banking contingent is very strong in favour of the double standard.

3675. (*The Chairman.*) I understand the view that you have just presented to us to be this: assuming that the increase or diminution of the volume of the currency affects prices proportionately, then you would be safer with your bi-metallic than with your mono-metallic system?—Yes, I think I would a little vary your mode of laying it down. It is not assuming that it affects it proportionately, but admitting that it would cause a disturbance, that disturbance, whatever it may be, and whatever its effects, would be greater and more certain in mono-metallic than in bi-metallic countries.

3676. (*Mr. Barbour.*) As I understand it, whatever the disturbance may be if you have a fixed ratio between gold and silver it is spread over a wider area, and consequently is less in degree?—Yes, it is spread over the whole area, that is really what it comes to.

3677. In times of monetary crisis is it not the case that considerable sums in specie or bullion are usually transmitted from one country to another?—Yes, certainly.

3678. And do you not consider it an inconvenience and a serious disability that the difference in the standard or currency between the two countries may prevent or delay the transmission of specie or bullion between them, to be used as a means of alleviating monetary disturbance in one country or the other?—Yes, I should think it may. It is certainly an inconvenience, whether it delays I am not sure.

3679. You consider that the removal of such difference in standard or currency between the two countries would remove such a possible difficulty?—Certainly.

3680. I believe that one-fifth of the total amount of coin and bullion in the Issue Department of the Bank of England may under the Act of 1844 be held in the form of silver bullion?—Yes.

3681. In 1848 the Governor and Deputy Governor of the Bank of England gave the following evidence before the Select Committee of the House of Lords on Commercial Distress. This is what the Governor said:—"I consider silver quite as available a means "for the convertibility of the note as gold. We have "been limited to keeping one-fifth of our amount of "bullion in silver, I think that limitation too restricted. "The silver can be readily sold in the market and "bank notes obtained for it. There is no merchant-"dise that will sell easier than silver. By dropping "a fraction in price we could get bank notes out of "the market immediately." Did the evidence of the Governor and Deputy Governor of the Bank fairly represent the opinion of the Bank authorities at that time?—Yes, I should say it did, and if it will not be too much trouble to the Commission to listen I should like to read them a paper by Mr. Morris, who was then Governor, on the amount of silver to be held by the Bank in the Issue Department; sent by him to Sir Robert Peel at the time he was introducing the Bill of 1844, and laid before the Secret Committee of the House of Commons on Commercial Distress in 1848, by Mr. Morris, in the course of his examination on the 7th of March: "It would be highly inconvenient "to limit the payments of the Circulation Department "to sovereigns. This would give a direct encourage-"ment to the export of that coin in preference to "foreign coin and gold or silver bars, each of which "description of bullion answers the purpose of export "when the exchanges require it, and do not occasion "the loss of the expense of coining, as sovereigns "when exported and melted do. The facility of "exporting silver in preference to gold, when such "export is expedient, is the true remedy against the "inconvenience of our standard differing from that "of other countries, and unless the Circulation Depart-"ment is allowed to issue against silver, that "inconvenience will be real and severely felt. So "long as a silver standard is not recognised, and "silver coin is used only as tokens under 40*s.* no "quantity of silver likely to be in the Bank can "affect the standard value of the gold sovereign; "but the sale of that silver may save useless coining "of sovereigns, and answer the same purpose. Silver "generally arrives from America, and latterly from "China, in large amounts and at pretty regular "periods. If the Bank is restricted from purchasing "that silver, it will always be bought by merchants "who will export it immediately, the principal demand "being for the Continent. No capitalist will find it "to his advantage to hold it; the variations in price "seldom, if ever, compensating him for the loss of "interest when the exchange is low and the price of "silver high, this export acts advantageously in "liquidation of payments due to foreign countries; "but when the exchange is high and silver low, the "silver will sell at a lower price than if the Bank "were allowed to buy it, and it will be exported "solely for the purpose of bringing back gold, the "expense of the export of the silver and the import "of the gold being an actual loss on the transaction. "The practice of the Bank has been to buy bar silver "at 4*s.* 11½*d.*, and dollars at 4*s.* 9½*d.*, which at the "French mint prices is equal to buying gold at "77*s.* 9*d.* When the exchanges fall, and there is a "demand for remittances to the Continent, the Bank "has sold the silver, which has answered all the "purposes of gold, has left a small profit to the Bank, "and saved the expense of exchanging silver for gold. "An unnecessary export of silver, that is, when it is "not required to rectify the exchanges, causes a "momentary rise in the exchange, which again falls "back to its original rate so soon as the operation is "ended. This momentary rise in the exchange, so long "as it lasts, is prejudicial to all parties who may have "to draw bills upon the Continent in payment for "goods and other exports. A stock of silver in the "Bank is convenient to our trade, particularly with "India and China; merchants often require that "metal as a remittance and would have to send to "the Continent for it at a greater expense if they did

" not find a supply at the Bank. It can never suit " the Bank to hold silver bullion in the Banking " Department, if ever it should do so it will be an " exception and not the rule. It is possible, from " some unforeseen circumstance, that gold may become " more valuable on the Continent than its present " relative value in silver; in which case, gold might " be withdrawn from the Bank and replaced by silver " to a large amount. To prevent this being carried " to an inconvenient extent it might be well to limit " the issues against silver to one-third of the whole " of the issues against bullion. Would it not be " better to legislate that the issues should be made " against bullion, leaving it to the responsibility of the " Bank direction whether those issues should be " against gold or silver?" This letter was sent to Sir Robert Peel, and was in fact incorporated by him in his speech in 1844 on this subject. He did not follow Mr. Morris' advice to limit it to one-third. He limited it, as you put in your question, to one-fifth, and I think while on this subject I might as well read a few passages from the evidence to the House of Lords on March 6th, 1848. Mr. Glyn said (Question 1832):—" I would suggest that the Bank should " advance on silver bullion. (1833.) To a limited " extent?—I think they might advance without any " precise limitation, because they can always export " it. *Mr. Palmer.* (994.) Silver can only be " purchased when the exchanges are in favour of " this country. (998.) Gold and silver are equal " in their power of connecting the foreign exchanges. " (1001.) It affords a marketable commodity at all " times saleable, thereby preventing the export of " gold, which it may be desirable to retain for the " maintenance of our own currency. (1004.) In " truth silver is not the only commodity with which " you might act on the exchanges, but it is a com- " modity which, being money in every part of the " world, is therefore the most direct commodity " which you can possibly have for the purpose. " Except as regards the United States. The United " States latterly have taken gold alone. (1005.) Is " not silver a legal tender, have they not in fact the " old standard of this country, a double standard, " but regulated in a manner which makes it more " favourable for the trader to pay in gold than in " silver?—Yes." Mr. Morris—Feb. 8th—" (341.) I " consider that it is immaterial whether it is gold or " silver. The Bank have purchased the silver " because, if the Bank had not purchased the silver, it " would have gone to the Continent. The principle " upon which the Bank buys silver is this:—When " the exchanges are high, and consequently the " price of silver low, we purchase it at a price equal " to buying gold at 77*s.* 9*d.* The whole of it " probably went in payment of the imports of the " country. (342). The silver is no part of the " medium of your circulation. You cannot pay " your debt in silver, nor can you convert it into " sovereigns, which are part of the legal tender of " the country; and therefore, though it is a very con- " venient description of merchandise, it is not to be " looked upon for the purpose in the same light as " gold?—I consider silver quite as available a means " for the convertibility of the note as gold . . . There is " no merchandise that will sell easier than silver. By " dropping a fraction in price we could get bank " notes out of the market immediately." Another in the Commons Committee. Mr. Morris says,— " (3242). Silver bullion gives a command over gold, " and over bank notes, therefore, provided we hold a " moderate amount of silver bullion, I do not think " it at all interferes with the power of converting " notes into gold." That is, of course, all before the action of France and Germany; and I think it is rather important as showing what the view of the people was in that day; I will read that portion of the report of the Secret Committee of the House of Lords which refers to this. " The limitation of " the amount of silver bullion which the Bank is " entitled to hold under the Act of 1844 has been com- " plained of by many of the witnesses whether their " opinions are favourable or adverse to the other pro- " visions of the Act. Cases are stated in which the " export of silver has been made, and may be made in " future, the means of rectifying an unfavourable foreign " exchange. Such is the opinion of the Governor of the " Bank: 'I consider silver quite as available a means " ' for the convertibility of the note as gold. We " ' have been limited to keeping one-fifth of our " ' amount of bullion in silver. I think that limita- " ' tion is too restricted. The silver can be readily " ' sold in the market, and bank notes obtained for " ' it. There is no merchandise that will sell easier " ' than silver. By dropping a fraction in price we " ' could get bank notes out of the market im- " ' mediately.' After Mr. Horsley Palmer had de- " scribed a former operation, effectually completed by " the Bank for rectifying the foreign exchanges by a " remittance of silver, he was asked,—' Do you think " ' that you have as much facility under the Act of " ' 1844 of effecting such an operation, if it should " ' appear desirable, as you would have if your hands " ' were not so much tied? There is one material " ' defect in the Act of 1844, as it has always appeared " ' to me, in the Bank being precluded from holding " ' more than a certain amount of silver, with refer- " ' ence to the gold in the Bank's possession. The " ' bank is thereby precluded from holding a large " ' amount of silver (it is curious that he says that), " ' which would in times of an unfavourable exchange " ' be equally beneficial with gold in meeting the foreign " ' payments.' Your Lordships will bear in mind that " the legal standard of this country is gold, whilst that " of the Continent of Europe is silver. In times of " deranged foreign exchanges it therefore seems obvious " that the export of silver in preference to gold should " be encouraged rather than impeded by any forced " legislative restriction. This is the more important, " as, from the mint regulations of the United States, " an unfavourable exchange with America is equalised " by the remittance of gold; a fact exemplified in the " efflux of gold in 1847, when 9,000,000*l.* in gold were " withdrawn for export. These consequences are well " described in Mr. Cotton's evidence. ' Do you con- " ' sider that there is any public advantage connected " ' with the restrictions imposed upon the Bank by the " ' Act of 1844 in relation to the amount of silver " ' which it holds? I do not think there is any public " ' advantage in that restriction. You think it might " ' be left perfectly free to the Bank to determine the " ' description of bullion which it should hold? I " ' think it might. In particular states of the foreign " ' exchanges is not the possession of a considerable " ' amount of silver bullion a matter of very great " ' convenience to the Bank? When silver was at such " ' a price that it could be purchased so as to be " ' secure of importing gold to a profit it was preferred. " ' You think that in that respect it would be wiser " ' and more prudent if the Bank were left unfettered " ' with respect to its purchases of silver? I think " ' the Bank might be left unfettered. I would state " ' that if the drain last year had been for any place " ' but America the silver would have gone first, and " ' we could not have had a surplus quantity.' The " Committee add the following extracts from the further " evidence of Mr. Horsley Palmer and Mr. George " Glyn. ' *Mr. J. H. Palmer:* You stated that under the " ' Act of 1844 the proportion you have of silver to " ' gold must be only one-fourth part of the gold, or one- " ' fifth part of the whole amount of bullion; do you " ' think there is any inconvenience arising from that " ' regulation? I think there is a material incon- " ' venience attending that regulation. Will you have " ' the goodness to state what that inconvenience is? " ' Silver being equally available for Continental " ' payment as gold, and perhaps more so, it is " ' desirable that the Bank should not be restricted in " ' the extent alluded to in the purchase of that " ' description of bullion, which is always marketable, " ' and which answers every purpose of correcting the " ' foreign exchanges. Would not an increased power " ' of holding silver bullion in proportion to gold tend " ' to diminish any danger of a sudden change of the

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" 'foreign exchanges? It does not diminish any " 'danger from a change in the foreign exchanges " 'further than as it affords a convenient mode " 'to the Bank of rectifying them. It gives " 'them the power over an article which is market- " 'able, and which, being the currency of the whole " 'Continent, affords an equal facility with gold in " 'making the foreign payment. Do you approve " 'of that clause of the Act which restricts the Bank " 'in the purchase of silver bullion? I certainly " 'do not. I think the restriction to one-fifth is very " 'inconvenient, and practically in the spring of last " 'year was found so. Merchants from the Pacific, " 'whose returns are very much in silver bullion, " 'found when it arrived last spring that there was no " 'market for it here, and they had to send it over to " 'Paris for returns in bills of exchange, and when " 'they came back there was a difficulty in dis- " 'counting. The interval lost, which is about six " 'weeks, is a very serious thing to a mercantile house; " 'and there is another evil in it; supposing the " 'amount of bullion held in the Issue Department to " 'be in the exact proportions allowed by the Act, " 'with one-fifth silver, and supposing that 400,000*l.* " 'of notes go in taking the same amount of sovereigns " 'out, that immediately alters the proportions right; " 'and this reduces the circulation another 100,000*l.* " 'to keep up to proportion. Did you not hear of a " 'case in which a merchant with a large amount of " 'silver bullion was unable to obtain advances upon " 'it? Decidedly he could not obtain an advance " 'upon it or sell it. I could never see any reason " 'why the Bank should hold only the proportion of " 'one-fifth silver There can be no reason why the " 'Bank should not make advances upon silver bul- " 'lion, which they can always export to get sovereigns " 'back or remittances from Paris.' In expressing " their entire concurrence in these opinions it is " scarcely necessary that the Committee should ob- " serve that no question of alteration of standard is " involved in them; nor do they countenance such " an alteration of the law as would render the coined " silver of the realm depreciated as it is, compared " with the mint price of silver, available, by sale, in " payments beyond a restricted amount." Mr. Morris, and Mr. Prevost, and Mr. Cotton were, one may say, the fathers of the Act of 1844. They were thoroughly conversant with all its provisions. Mr. Glyn and Mr. Palmer, whose words I have also quoted, were thoroughly acquainted with the whole matter, but were opposed to the Act of 1844.

3682. Have you any objection to say whether the Bank now holds silver in this way?—No, they hold none.

3683. And in the present state of affairs would the Bank authorities regard the holding of silver with favour?—Certainly not; we could not hold silver at present. We could by law, but it would be indiscreet to do so. Shall I tell you what amount we have held since 1844? In 1844 the Bank held about 1,700,000*l.* in silver, in 1846 about 2,700,000*l.*, in 1848 it ceased to take silver, and by 1853 (August) it held none; in 1860, by arrangement with the Bank of France, the Bank held 2,000,000*l.* in silver for a short time.

3684. (*The Chairman.*) Then it had ceased to hold silver, entirely independently of the change in the practice of the Lation Union, and the demonetization?—Entirely.

3685. (*Mr. Barbour.*) Would it be said at the present day that silver was as available for the convertibility of the note as gold?—No, certainly not.

3686. I suppose the objection to holding silver at the present day is due to the fact that silver fluctuates largely in value in relation to gold, and that the French mint is not open to free coinage as before at the old ratio?—That is so.

3687. I will now turn to another portion of the subject. If the balance of trade turns against a country exchange, I believe, becomes what is called unfavourable for that country?—Yes, certainly.

3688. The effect of the alteration in exchange is to make it somewhat more profitable than before to export goods from that country and slightly less profitable to import into it, and this result tends to adjust the balance of trade?—Yes, if there is no common measure.

3689. But if the countries have the same standard the alteration in exchange cannot ordinarily be carried beyond specie point?—Certainly.

3690. If an alteration in exchange up to specie point has not sufficient effect on the trade to adjust the balance, the country which is in debt would discharge its liability by a remittance of specie?—Yes.

3691. But if the two countries have not got a currency which is interchangeable the debt cannot be discharged by a remittance of specie, and in such case the alterations in exchange must proceed to whatever point may be necessary to adjust the balance between the two countries by stimulating exports and checking imports?—Yes.

3692. Would you therefore say that it is the case that international balances must be settled by commodities when there is no international money available for the purpose?—Certainly.

3693. If two merchants had numerous transactions together from time to time, and if on making up their accounts a balance were found to be due by one to the other, that balance would most conveniently be settled by the payment of money?—No doubt.

3694. If the merchants had no common money the balance could only be settled by commodities?—Yes, only by commodities of course if there is no money; or by that which might be a commodity to one but money to the other, but still it would be a commodity.

3695. That might be very inconvenient?—Yes.

3696. There might not be any commodity which the debtor could buy at the moment, except at a sacrifice, and there might not be any commodity which the creditor would be willing to accept unless at a rate which would involve great loss to the debtor?—Yes, I suppose that is the case.

3697. I suppose if balances between merchants and traders had to be settled by goods, because they could not be settled by money, that fact would give rise to much hardship, and be a great hindrance to future trade?—Yes, I suppose it would be a hindrance to future trade.

3698. I will now read you a passage from Goschen's "Foreign Exchanges" which bears on this subject. Mr. Goschen is illustrating the difficulty which a country like Russia with inconvertible paper experiences when she has to pay a balance on her trade, and exporting commodities is, for the time, practically impossible. "A Russian spinner has imported cotton " and owes the amount thereof in English sovereigns " to a merchant in Liverpool. He has roubles suf- " ficient in his hands in paper money, but what steps " is he to take to procure sovereigns for them? " Being debarred from sending bullion, he has only " two courses open, either to buy a bill on England " from others who happen to have sent produce " thither, and thus have a claim on an English house " which he can buy and transfer to his Liverpool " creditor; or to send the produce, which will sell " for sovereigns, himself. Where there is a pause in " exportation, as is the case during a large portion of " the winter season in Russia, he would be absolutely " unable to send any remittances at all, unless he " could find bankers or others who might draw on " England, or on some other foreign banking centre " in anticipation of future exports, and would sell " him the bills. But it will be apparent, that, as to " price, he is entirely in their hands. If, as is often " the case, such Russians as are indebted to foreigners " are bound at any cost to place funds in English " money into the hands of their creditors by a given " day, there would be no limit to the price which " might be exacted from them—in other words no " limit to the fluctuations in the exchange. The " relative value of their paper roubles to bullion

" seems not to enter into the question at all. Supply " and demand alone determine the price. And if " the exports of such a country do not equal the " imports (and this is by far the most general case) " so that the demand for bills to pay for the imports " exceeds the quantities of bills which is supplied by " the exports, the balance which the country has to " pay can only be settled by an enormous sacrifice, " in fact, cannot be settled at all except by a cessa- " tion or diminution of imports, or by a foreign loan, " the latter being only an expedient to gain time and " an adjournment of the payment of the balance " due." The case quoted by Mr. Goschen is an extreme one, but do you think that something analogous to what Mr. Goschen here describes may occasionally occur in the case of England and India? —Yes, it seems rather an extreme case, but I suppose it would happen in other countries, India, and elsewhere, so far as the circumstances were the same.

3699. (*Mr. Courtney.*) Does the difficulty pointed out by Mr. Goschen in that passage turn at all upon the use of the paper rouble? Does it not turn on the interruption of commerce during the winter months? The ultimate difficulty in the case is the interruption of commerce in winter, which compels the merchant to abstain from sending commodities for commodities, and he therefore has to go to the bank, and he is in the hands of the banker?—No, not so, because if he has a right to demand gold from his banker, he gets gold and sends it. He waits no doubt, but he sends ultimately the gold with which he can pay his English creditor. That is how it strikes me.

3700. (*The Chairman.*) Still applying this theory to the case of India, must not the matter depend upon the banking facilities that would be afforded there, and the amount of banking competition?—Certainly it would. The banking competition would alleviate the matter very considerably to him, but still he would be in the hands of the banker. There might probably be some individual bankers who would help him out of his trouble with the other.

3701. (*Sir John Lubbock.*) A banker would not have an inexhaustible source; he would only help him to a certain extent?—Certainly.

3702. (*Mr. Barbour.*) If the balance of trade turns against India at a time when exports cannot profitably or readily be increased, it is not practicable for India to remit specie to England, and consequently exchange must go on falling until exports are either thrown on an unfavourable home market, or the import trade is suddenly checked to the loss and inconvenience of all concerned?—I should think so. That seems to be right.

3703. (*The Chairman.*) Will you tell me what you mean by the balance of trade at any time? Do you mean transactions that have gone on for a certain time, or a balance of trade to be considered day by day?—I should say "balance of trade" is not a good expression. A better expression is "balance of indebtedness" between the two countries. Imagine the two countries to be two men having transactions with one another, and remitting the one to the other either gold or silver, or produce or manufactures of any kind, the "balance of indebtedness" is that which at any moment may be found to exist between them.

3704. (*Mr. Barbour.*) In practice, India would very seldom require to actually remit specie to England, but she may suffer from being forced to take silver at a time when, from other causes, the balance of trade is turning against her, and when silver would not be imported if there was a market for it as currency elsewhere?—I suppose that is so, but I do not feel quite certain about it. I think it is so.

3705. (*The Chairman.*) Supposing the balance of indebtedness on a particular day wereagainst India, she would not remit the rupee at its artificial value in relation to gold, she would not necessarily transmit silver, as the next day the indebtedness might be the other way?—Oh, Certainly.

3706. It must be a continuing indebtedness, or an anticipated continuing indebtedness, must it not?—It would be shown, as by an index, by the rate of exchange on bills on that particular day. She would not necessarily remit silver certainly, but somebody would wish to remit bills, and the differing cost of the bills would show the fluctuating state of the indebtedness of the two countries, not with India only but with any country.

3707. (*Mr. Barbour.*) And the exchange would not be carried beyond specie point if they had the same standard?—Certainly.

3708. (*Mr. Birch.*) And the expense of bringing it over?—Specie point includes the expenses; Mr. Barbour's question referred not to par point, but to the specie point.

3709. (*Mr. Barbour.*) Is it your opinion that the want of a fixed specie point between England and India tends to cause panic in the Indian Exchange? If there were a constant ratio between gold and silver in Europe, merchants and others would know that however great the difficulty of making remittances might be for a time, exchange would soon be regulated by the cost of transmitting specie, and they would have no alarm about the future?—Yes, I do not like to commit myself about the question as to whether it would cause panic or not, but certainly a country can always deal more satisfactorily with one where there is a point below or above which the exchange cannot go.

3710. I suppose you know there have been panics in the exchange market in late years?—Oh, certainly. At this very moment, as I am told, there is a kind of panic, the banks will not sell forward exchange at all.

3711. If there was a fixed par of exchange between gold and silver the ground for alarm as regards the future would be very much removed?—Certainly, there is no question about that.

3712. But as matters now stand, when a fall takes place the merchants cannot conjecture at what rate the exchange will ultimately settle, and consequently they are subject to and act under the influence of panic?—Yes.

3713. Do you consider that these difficulties would be obviated or greatly mitigated if England and India had a common money available for international purposes?—Yes, I do.

3714. We have seen that in the case of England and India the balance of indebtedness must be settled by commodities, and cannot be settled by money?—Is not this to some extent a return to barter, and attended with many of the inconveniences of barter?—Yes, certainly when you pay with commodities instead of paying with money you have come back to a kind of barter; it is not quite the same, but it is a sort of barter.

3715. So long as there is no constant ratio between gold and silver, and no international money available for the settlement of balances between gold and silver countries, is it your opinion that a country with a silver standard has a material advantage over a country with a gold standard in trading and dealing with other countries that employ the silver standard?—Yes, I think the evidence shows that to be the case.

3716. I believe you have given some attention to the history of the use of gold and silver as money in modern Europe?—Yes, certainly.

3717. Is it the fact that in very early times silver was practically the sole standard, the few gold pieces that circulated being taken at their market value?—Yes.

3718. And when gold began to be more largely used as money, was it used as the sole standard, or was it used as legal tender at a fixed ratio to silver?—At a fixed ratio generally.

3719. As far as you are aware it was always the case?—It was always the case.

3720. I believe that all countries in Europe did not use the same ratio, but that the ratio varied slightly in different countries, and that even in the

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same country the ratio was sometimes changed?—Yes, and the difference of ratio between different countries was really the cause of the fluctuations of the currency in each country; that is to say, the causes of the changes in the circulation.

3721. (*Mr. Courtney.*) How is this ratio determined?—I suppose by law.

3722. But the universal medium of exchange and payment was silver?—Mostly silver I think, but then there were gold coins, and a decree was made by the Government that the gold coin should be current for so many shillings if it were in England, or so many livres if it were in France; but whether it was obeyed or not is another thing.

3723. But did these gold coins form a considerable proportion of the currency?—That I cannot answer. I should say they did not.

3724–5. (*Mr. Barbour.*) But so far as your information goes, gold was always effectively linked to silver up to 1873?—Yes.

3726. And is it your opinion that its being linked to silver in this way materially affected or influenced its purchasing power?—I think it did.

3727. So that even when England adopted the gold mono-metallic standard the purchasing power of that standard was materially affected or influenced by the ratio between gold and silver prevailing in France and other countries?—Certainly, the two metals were practically linked together there in England as elsewhere although silver was not legal tender.

3728. Is it not the case that since 1873 the purchasing power of gold has ceased to be affected or influenced by the existence of an effective fixed legal ratio between gold and silver?—Yes.

3729. And would you say that the use of gold since 1873 as a monetary standard on an extensive scale unregulated by its being linked to silver is an experiment, the results of which cannot be foretold from any experience we have had in the past?—Certainly, it is entirely a new state of things. We have never had the experience before of a standard such as we now have, a single mono-metallic standard with no connecting link between it and silver the standard of other countries. It is a new experiment, and a very unfortunate one, entered into in 1873. Sir Robert Peel's Act in 1816 was also an experiment, and it was only successful because it was safeguarded by the French Monetary Law.

3730. (*Mr. Birch.*) I understood you the other day to assert and desire to prove that given an important commercial and banking centre, that centre can work the bi-metallic system; but you would not admit that Jersey or the Isle of Wight has a banking or commercial position which would in any way enable these islands to work the system in the same way that France worked it for years?—Certainly not.

3731. Theories in treating of currency require that the example should be such as can be recognised by the light of experience?—Oh yes, certainly.

3732. You said that there never had been any difference in the value of gold and silver in France, and that it was only a question of a small agio at times which travellers paid for the convenience of having either coin?—No, I do not say precisely that. I say that what we observed in France ourselves was chiefly as it affected travellers as they were passing through; but as I stated in one of my answers, the extent of the agio altered the specie point. I made my statement with that qualification.

3733. Now agio simply means a premium on one or the other metal. It may not affect the interior trade operations of the country itself, as one coin has the same purchasing power as the other in respect of commodities, but it has an effect in international operations, and therefore in the value of the metals when one or the other becomes scarce, and is required for export—gold to England; silver to the East. You said that if you had money in Paris you could always get gold for it. Of course you can get gold here, for our standard is gold, but supposing the balance of our cash account with France to be in our favour, and gold in France to be scarce, it would command a premium, and this premium would be shown in the exchange, in the following manner: We will suppose that you have 100,000 francs with your agent in Paris which you desire to transfer to England. If I were certain that your cheque in Paris would be paid in gold I would give you the exchange of 25·30 to-day, and would pay you in London 3,952*l.* 19*s.* 3*d.*, but as under present circumstances your cheque would be paid in bank notes or silver, I could only give you the exchange of 25·42½, and I should only pay you 3,933*l.* 2*s.* 8*d.*, which would be equivalent to a premium in Paris of half per cent. on gold. Silver, bank notes, and gold are equally available for all payments in France, but bank notes and silver will not serve to pay in England the cash balance due to this country, and therefore a premium is paid for gold, which as you are probably aware is being exported, although in small amounts, to this country at the present moment?—That is perfectly right.

3734. Can you give the Commission any idea of what in your opinion would be the immediate effect of the free coinage of silver as regards England?—I presume the Commission will accept the fact as stated by Hume in his essay on money, that an increase of the measure of value enhances the price of commodities. He says, "It seems a maxim almost self-evident "that the prices of everything depend on the propor- "tion between commodities and money, and that any "considerable alteration of either has the same effect, "either heightening or lowering the price. Increase "the commodities, they become cheaper, increase the "money they become dearer; as on the other hand, "a diminution of the former and that of the latter "have contrary tendencies." If then the linking together of gold and silver as the measure of value will increase the quantity of that measure, no doubt a rise of prices will follow, not necessarily to an absolutely higher level than that at which they stand now, because other circumstances may affect commodities, but to a higher level than they would otherwise attain. What then would the increase be?—Nothing very considerable at first. In France and the Latin Union, and in Germany also, the coined silver is legal tender at its full nominal value. So also in the United States, so far as it is in circulation in specie or in certificates. In India all the silver coined and coinable has very nearly the full purchasing power of country produce which it had before, so that there would be no great addition to the measure of value on the score of these admixtures with the existing gold money. But the unissued dollars in the United States Treasury would come forth with the purchasing power indicated by the ratio, and would swell the quantity of purchasing metal. So also the uncoined silver held in Europe, which now would only sell for 46*d.* an ounce, would obtain a greater purchasing power, the open mints of the bi-metallic countries receiving it and all the annual produce of the mines, for coinage. If it be true that some silver mines have been closed because of the low price of the produce—a statement which must be received with much caution—their produce would be a further addition to the mass of the world's measure of value, which thus being somewhat larger than it was in comparison with the existing mass of commodities, would involve an enhancement of prices. So far as the mass of silver would gain in present purchasing power, the total mass of silver and gold together would lose, so that the effect on England would be a slight diminution of the aggregate value of the amount of gold in the country. But the gain would be, that the future supply of gold and silver together would better suffice to fill up the gap caused by wear and tear and loss, and to correspond to the new demands of increasing population in the countries adopting the bi-metallic standard, than would gold alone in the gold using countries, or silver in the silver-using countries, and that we might therefore expect greater stability in the relation of money to commodities. Here I have only spoken of the effect upon prices,

but the other effect of the bi-metallic standard, that of establishing a par of exchange between gold and silver, has a somewhat different bearing.

3735. But what I wanted was the immediate effect in England. What would be the immediate effect of our opening our mint to the free coinage of silver?—I think I have shown that there would be no very great difference, but the immediate effect would be that silver would return more or less to its price before 1873. I think that that would be instant. I cannot see how it could be otherwise for the reason that I have given, unless there should be any great change in the state of indebtedness between England and France. Supposing the French mint was open or the English mint was opened under like conditions, immediately the price of silver would rise to about what it was before, but the effect upon prices generally, that is prices of commodities, would be only that which would be produced by the enlargement, no very great enlargement, the enlargement of the general measure of value by the addition of these portions of the general mass of silver that now are not money.

3736. For the present moment I am not referring particularly to the question of price, I am referring to the great volume of silver which exists in America, and which as you are aware is perfectly usable there, but they do not like to use it. Supposing our mint to be open and a very large amount of silver to come over here and be coined into English dollars or whatever it might be, would not that affect immediately our stock of gold, as they prefer gold?—In the first place I must point out that the only silver that is so affected is that lying in the vaults of the Treasury, represented by certificates in the possession of the Treasury. That represented by certificates in the hands of the public is in circulation, just as the gold in our banks is in circulation by means of bank notes. Certificates are not so freely accepted, but they are in circulation. Another thing I would say. You assume that they prefer gold very much. I think they, or some of them, prefer gold so long as there is no bi-metallic arrangement. They are anxious to have a bi-metallic arrangement. Those, therefore, who prefer gold only prefer it now while such an arrangement does not exist; but I will assume for the purpose of your argument that they do prefer gold, and that they would wish to buy it. Then the result would be just what you say, that they could not make us take their silver, or rather they could not make us give gold for it. They could make us take their silver, because it would be what may be called a forced import inasmuch as, by the hypothesis, it is money, but they could not demand gold for it, and therefore, if they really desired to have it, the probability is that they would give us ultimately a premium for it; that is to say, that we should get the advantage of having, say, 16 ounces of silver for one of gold, when $15\frac{1}{2}$ will buy our commodities. That is what would be the case, but there could be no very great amount.

3737. If they gave us their silver at the rate of $16\frac{1}{2}$ to one, and we should be entitled to return it to them at the rate of $15\frac{1}{2}$ to one, it would be rather profitable to us?—Yes, supposing a man sent a quantity of silver here and did get gold for it, which he might do by paying an agio, it would be quite open to the Englishman at once to make a remittance of silver, and restore the thing to what it was before.

3738. And supposing the mints of the world generally were open to the coinage at the market ratio of to-day do you think any effect at all would follow?—None; I think that what you have described is a game that would not be found worth playing.

3739. Evidently your idea would be to raise prices by adding to the currency?—No, that is not so. My desire is to restore the monetary standard of England at least to the position which it occupied before 1873. It was then by law a gold standard, and gold was our only legal tender; but it was, in fact, a gold standard with an immutable par of exchange between it and the standard of silver-using countries. That is to say, that $15\frac{1}{2}$ ounces of silver having in France the same paying and purchasing power as one ounce of gold, and one ounce of gold here being 3*l.* 17*s.* $10\frac{1}{2}$*d.*, it follows that $15\frac{1}{2}$ ounces of silver were equal to that sum in sterling; or in other words that one ounce of silver was equal to a little more than 60*d.* The effect of a return to that condition of things, or to the older condition which existed prior to 1816, would, no doubt, be that trade with silver-using countries would be placed on a firmer footing, and a subsidiary effect would be that there would be some rise in prices, and that a stop would be put, once for all, to the fluctuations of price springing fron this particular source. My impression upon the whole matter is that it is better for commerce that causes of instability should be, as far as possible, removed, inasmuch as trade prospers more when prices are more or less stable. Trade prospers more when prices are somewhat flattering to trade than when they are depressing to trade. My main object is to restore the par of exchange between gold and silver. The consequential effect of whatever enlargement of the volume of the currency might ensue, would be, as history will show you, a tendency to improvement in the condition of trade. The mere increase is not large, but an increasing volume of currency corresponding to the increase of population and the increase of production of commodities has been favourable to trade rather than the contrary.

3740. (*Mr. Barbour.*) Do you mean that the ideal we should aim at is a good monetary standard?—The better, the more stable the monetary standard, the better for trade. The whole object of Lord Liverpool in his treatise (beyond that of regulating coins, which was the main thing that he desired) was that there should be a unity of standard between people having commerce one with another between London and York, consequently I say it follows from that, that there ought to be an unity of standard, so far as it is practicable, between London and New York or between London and any other part of the world. Everybody is willing to allow this, and would perhaps desire that standard to be gold or silver. If you can satisfy me that it would not be productive of evil to have a single mono-metallic standard all over the commercial world, I should say theoretically that is the best, only that as I have shown before the single metal is more liable to fluctuations of production than the two metals.

3741. (*Mr. Birch.*) The value of money is increased in an inverse ratio to its quantity, the supply of commodities remaining the same?—Yes.

3742. But a large increase of the quantity of commodities must of course make prices fall?—Yes, certainly.

3743. The raising of prices would affect the labouring classes more than any other?—I do not think it would. I think, as I said in my last examination, the working classes are the last of all to feel any change; for example, now the wage fund has diminished, but the wages of particular wage-earners have not, we are told, fallen in nearly the same proportion.

3744. (*The Chairman.*) Do you mean to state that as generally affecting all wage earners, that as a rule, the wages have not fallen?—I say in many cases they have not fallen, but the wage fund has diminished, fewer people are employed, therefore you may say wages have fallen in the aggregate, and in many instances they have fallen in individual cases.

3745. (*Mr. Courtney.*) Wages are last to be moved whether they rise or fall?—Yes; and when they are moved, it is first shown in the rise or fall of the numbers employed, not in the wages of individual workmen.

3746. (*Mr. Birch.*) France and Germany must have suffered a good deal more than England if the suspension of the coinage of silver has curtailed the currency, for England maintains the same course as she has followed for the past 70 years, and her banking system has economised currency to an

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enormous extent?—Your question seems to lose sight of the distinction between the idea of currency and the idea of measure of value. The currency in France and Germany has been very little altered, for silver is still current. The contraction of the measure of value must have affected them as it has us. It appears to me, that in saying that England maintains the same course as she has followed for the past 70 years, you grasp the shadow instead of the substance. For 70 years from 1803 England possessed an excellent monetary system, resting on the foundation of practical unity of money in all the world. The acts of 1873 removed the corner stone of that foundation, and totally destroyed that continuity which you imagine to be still existing. As to economy of currency, there has been hardly any since 1873.

3747. There is an enormous increase of banking facilities, banks have increased?—Yes, but I doubt whether that has made much difference. Bank notes greatly economize gold, and clearing houses greatly economize bank notes, but the only thing that has happened of late to touch currency and the employment of gold is the use of postal orders, of which a very large quantity are in use; but they only economise gold or notes so far as they remain in circulation and pass from hand to hand. Their chief use is to enable small remittances which before could not be made.

3748. (*The Chairman.*) But would not the fact of a very large number of branch banks going into small towns and villages, which would make cheques much more used in place of money, would not that be an economy?—Certainly, if cheques were used in place of money, it would.

3749. But has not that been the case of late years? You will find two or three banks in almost villages now where you saw nothing of them a few years ago?—But all that requires provision of money for the meeting of cheques, and the postal notes really require a very large provision of gold in all the post-offices which was not required before.

3750. (*Mr. Courtney.*) You would not say that the multiplication of banks or rather the multiplication of cheques causes an increase in the use of gold?—No, what I meant to say was that our using more cheques requires the banks on which they are drawn to keep a greater store of notes and gold; I meant to say that it is not all diminution of the need for currency. It is very difficult to say what has been the economy of gold produced by banking expedients. Cheques have increased no doubt, but the fiduciary issues of the country have diminished, the Bank of England only taking up a portion of the lapsed issues of the country banks, and those banks themselves not issuing nearly to the extent allowed by law, but presumably supplying the void by Bank of England notes issued in gold. I think also that inland bills have greatly diminished in number, and that their place has been filled by cheques.

3751. It may be necessary for the bank to keep one tenth of what private persons would be circulating at their hand?—Well, I cannot answer for the fraction. It depends upon the balance the bankers have to pay to one another at the end of their clearances, a 5*l.* note might balance 500,000*l.*

3752. (*Sir T. Farrer.*) When you say that there have been no economies in the use of gold, do you confine that to this country or do you extend it to the foreign countries?—I speak only of the years since 1873. In foreign countries there has been economy in the use of gold, that is to say, that the use of cheques has much increased in France. In other countries I cannot say whether it is or not. It is now the case that an Englishman's cheque will be taken if he is travelling abroad, but that only takes the place of ordinary bills of exchange.

3753. The foreign practice is as important for our purpose as the English practice is it not?—Certainly, only that we have not I think much evidence about the foreign practice, and we certainly know that it has not got to anything like the point of perfection that our practice has. Whatever may be the economy due to banking expedients, it can be as nothing compared to the extension of the use of gold as money since 1873.

3754. (*Mr. Barbour.*) Are you aware whether the reserve of gold in the banks of this country has actually increased during the last 10 or 15 years. If there has been a great economy of gold, other things being equal, one would expect the reserves to increase?—I do not think you could exactly expect that, because the reserve is affected by so many things.

3755. (*Mr. Birch.*) There is practically only one reserve?—There is practically only one reserve.

3756. (*Mr. Barbour.*) Is it larger than it was 10 or 15 years ago?—It is very difficult to make a useful comparison. The banking reserve varies from day to day, and is governed by causes apart from this question. It is now 15,500,000*l.* In 1877 at the same date, it was 14,441,000*l.*; in 1871, 17,861,000*l.* The average in the six months, March–August, 1886, was 12,600,000*l.*; in 1877, 13,000,000*l.*; in 1871, 17,861,000*l.* The gold on the same date was 24,500,000*l.*; in 1877, 25,700,000*l.*; in 1871, 22,900,000*l.* The average for that half year, in 1877, was 26,200,000*l.*; in 1871, 24,600,000*l.*; last year it was for March–August half year 21,200,000*l.*; for September–February 1877, 21,000,000*l.* The figures are roughly stated. I think the other bankers may keep more in their tills now than they used to do, chiefly because there has been such an outcry against them for not doing it. That is only a conjecture of mine; I have no knowledge on the subject.

3757. (*Mr. Courtney.*) The issues of those country bankers who are entitled to issue notes of their own, do you know how they stand with respect to their limits?—They are very much below their limit.

3758. Would not that point to a reasonable cause of the diminution also of their reserves in cash?—I suppose it would. They use more Bank of England notes than they did, and for these, of course, they need no cash reserve.

3759. (*Mr. Chaplin.*) I think you said just now that, although it was not your object, one effect of adopting the bi-metallic system would be to raise the price of all commodities generally?—Would be not of necessity to make the price of all commodities higher than it otherwise was, but to raise it *pro tanto*. That is to say, other circumstances might combine to keep them low, or even to lower them.

3760. Other things being equal, that would be one general effect?—I must believe that it would, if I believe that the scarcity of the measure of value, compared with the commodities it has to measure, has lowered prices. Some people, I observe, use the mutually destructive arguments (1) that gold is not scarce, and that there is no consequent fall of prices, (2) that we must beware of augmenting the measure of value lest prices should rise.

3761. Now the chief commodity that a working man has to dispose of is his labour?—Yes.

3762. Then I presume on the same principle the price of that commodity would be increased?—Ultimately.

3763. In other words one effect of it probably would be to raise wages?—I think so.

3764. (*Mr. Courtney.*) Not real wages?—No, not real wages; because commodities also, the means of life, might rise.

3765. (*Mr. Chaplin.*) But in all probability the labourer would receive an actual gain, an improvement in the actual wages that he received?—Yes.

3766. (*Mr. Houldsworth.*) Supposing the appreciation of gold has not affected his wages in lowering them, and that this bi-metallic law came into operation what would you say then?—I think that the probable effect would be that the old impetus that was given to all commodities would ultimately reach him, and that his wages might even go still lower, notwithstanding the effect of the increase of the measure of value; then

would begin the effect upon all others, and he would be raised again.

3767. (*The Chairman.*) But assuming all other things to remain the same everything would be raised equally?—All commodities.

3768. Then supposing all other elements to be constant, the wages would be raised, and everything else would be raised, so that of course he would be no better off than he was before, and inasmuch as he would be the last to get his wages raised, would he not be worse off than before?—No, not necessarily, because, though the commodities *en gros* would rise, with the wages I put retail commodities also, and the necessaries of life; I mean that there is a difference betweeen the prices of the seller of corn and the miller, the miller and the baker. The seller of loaves does not raise his prices in the same proportion, nor at the same time, as the seller of flour; nor does the seller of flour in the same proportion, nor at the same time, as the seller of wheat; but of course it all equalizes itself.

3769. Is not that rather less the case than it was, that distinction between the alteration of price in the wholesale commodities, and its being felt by the working classes since the introduction of co-operative stores?—I suppose it may, from one cause or another; I think the action is much more rapid than it used to be.

3770. (*Mr. Barbour.*) A good monetary standard is an advantage to a country, both as regards production and trade, and tends to increased prosperity?—I think so. It gives the country with a good monetary standard more profits than are made in a country with a bad one.

3771. And the working man, I presume, like everybody else, would share in that prosperity?—There would be more funds to pay him out of.

3772. (*Mr. Chaplin.*) I have arrived at this point that one probable effect of adopting this system would be to raise the wages of labourers generally?—Ultimately.

3773. The question whether that would constitute a real gain to him or not is another question?—I think the general prosperity would benefit the labourer as well as other people.

3774. Then I understand that the owners of all kinds of commodities, of every species of commodity, would gain by the adoption of this system?—Yes.

3775. They would be in a better position than they are?—By placing the commerce of the country in every point on a better footing.

3776. Now what would be the effect on the owners of gold or of securities which are bound to be paid in gold?—The effect on the owners of gold would certainly be a little against them, slightly against those who live upon fixed payments. What somebody described, Mr. Grenfell I think, as a thousand miles of old maids, that is those who are living upon Consols, are those who would be affected. The 3*l.* that they receive upon Consols may produce a little more now than they would then, very little, because as I say, it has not reached in a great extent the necessaries of life.

3777. Then does it not to some extent become a question between the interests of the owners of gold or securities which are bound to be paid in gold on the one hand, and the interests of owners of all other commodities on the other?—Yes; between owners of fixed incomes and those who have to work for their maintenance and increase of their incomes; and, in some degree, between debtor and creditor.

3778. I want to ask you one or two questions about the agricultural interest. Is it your opinion that that interest is injuriously affected by the present state of things?—Very much so.

3779. And how does that injury arise?—It arises from the stimulus that is given to foreign producers who are working on a depreciated currency, not necessarily that they are making great profits, though in many cases they are making profits, but the stimulus that is given to production which enables them to send their corn here at a cheaper rate. That is one of the causes. The other is the general fall in prices which affects them like other people; some of them have to pay mortgage interest, some to pay fixed rents on lease, the farmers having to pay rents on an old basis, and to sell the produce of their farms on a new.

3780. Do you consider that the corn growing industry is the branch of agriculture that is chiefly injured at the present time?—I suppose it is.

3781. I gather from you that the present system then acts like a bounty on wheat exported from India to England?—Yes, what amount of bounty I will not venture to say.

3782. Then I suppose that it acts upon all other commodities that are exported from India to England which are also produced in this country in the same way?—Yes.

3783. What is the effect upon commodities exported from England to India? Does it act like a protective duty in India?—I never did export any myself, and I feel diffident about answering questions as to the trade between England and India, except upon trade principles. I think you will probably have before you somebody who can answer that better than I could.

3784. But you are clear upon this, that it acts like an export bounty on commodities exported from India to England, and to that extent the English producer is injured by it?—Yes; also that the Eastern manufacturer is able to interfere with the Lancashire trade in dealing with other silver-using countries. The operation is different; the exports to England being stimulated by the depreciation, the exporter to silver-using countries being free from the risk of a sudden fall in the value of the money for which his goods are sold.

3785. Then as a remedy to that state of things you recommended "the adoption of the bi-metallic law"?—Yes, the French bi-metallic law, which was the English bi-metallic law with some variation before the suspension of cash payments.

3786. I understand you to say the present difficulty is owing not to natural causes but entirely to legislation?—To foreign legislation entirely.

3787. Beginning in 1873?—Yes.

3788. Did I understand that you would be satisfied to go back to the state of things which prevailed before 1873 if that were possible?—Yes, I think certainly, and I think also that the Frenchmen have repented of their repentance. They altered their law in 1874, and I think they are sorry for it, but it is a very difficult thing to retrace one's steps, more particularly if you have no one to stand by you while you do it.

3789. In fact what you are asking then, or what those whose interests you represent are asking is nothing new?—Nothing new at all.

3790. You merely wish to revert to the old state of things?—I should be content to revert to the old state of things.

3791. You see no difficulty in getting other nations to do this?—I think there is none in conjunction with England. There would be considerable difficulty in getting Germany to move without England, and I think France also without Germany. Whether the United States will ultimately take the bull by the horns I cannot say.

3792. But assuming that England was willing to take the first step there would be no difficulty in your opinion with regard to other nations?—None at all.

3793. But in order to induce them to do so is it absolutely necessary that England should make the first move?—A move, whether the first move of promising to join them is another thing. I think I said in my former examination that something short of our absolutely adopting the bi-metallic law might be sufficient to satisfy other nations, because in 1881 there was a certain willingness expressed to act if England would make some concessions.

3794. (*Mr. Courtney.*) You said just now in answer to a question of Mr. Chaplin's that the bi-metallic

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proposal was to go back to what had existed?—Yes.

3795. As far as England was concerned it is going back 70 years?—Yes, if you mean our adoption of bi-metallism. If you mean procuring a return to that system on the part of others, while we remain wholly or partially aloof, it is going back 14 years, during all which time our 70 years' condition has been greatly impaired.

3796. During which period there have been innumerable contracts now existing, created;—Now existing, I do not know.

3797. Are there many contracts of debtor and creditor now existing which date before 1817?—Well, I should have thought there were not.

3798. Almost every operative contract of the present day is later than that?—I should think so.

3799. It came into operation under the mono-metallic law?—Under the mono-metallic law, yes..

3800. Now you said in answer to Mr. Chaplin, that the change would be beneficial to debtors but injurious to creditors?—Yes, there would be no doubt some theoretical injury to creditors, inasmuch as by the hypothesis the gold that the creditor has a right to receive would not purchase him quite so many commodities as it did before, but it would be for the benefit of creditors also, inasmuch as it would be for the benefit of the country and its commerce.

3801. Yes, but in respect to the relations established by contract, all of which are subsequent to the creation of the mono-metallic law, the change would be for the benefit of debtors and to the injury of creditors?—Yes, I think it would, in theory. In practice you would find it difficult to assess the damage: the advantage to the producer would be great, the effect on the creditor very small.

3802. Is it not a very serious thing in your opinion to suggest a change of law which would operate to alter contracts in that way?—Well, the contracts have been altered without our action very considerably since 1873 for the benefit of creditors and for the harm of debtors.

3803. Not by any action of England?—No, but by legislative action.

3804. Well assuming it to be such, it may have been altered by natural causes also?—Yes. Of course I should not advocate interference on the score of natural causes.

3805. It is a matter of dispute how far the contract which exists, which came into operation under the mono-metallic law, was made with reference to all kinds of changes that might happen in the future independently of the action of our own legislature?—Yes. But I would defend our commerce and our people against the consequences of adverse foreign legislation, even though the doing so deprived some portion of the people of some small advantage which that legislation had given them at the expense of their neighbours.

3806. And you propose that our legislature should alter the character of contracts to the injury of creditors on account of something which may have been done outside of England?—I would not say on account of something that has been done, but because we see that the action of foreign govenments upon the trade and commerce of this country has been prejudicial, and we wish in the interest of trade and commerce, therefore in the interest of the whole country, to remedy that; and when you say an injustice is done, injustice is one thing and harm is another. Injustice was done in 1816, very great and instant injustice was done to the debtor class; injustice was done in 1797, though not with such immediate results, to the creditor class, when England thought it necessary to do one or either of those things it was done for the good of the country at large in the mind of the people who then acted, and not with the view to the consideration of particular interests. I believe that the harm that would be done to the one and the good that would be done to the other, by that particular thing, would be infinitesimally small, and I should find it extremely difficult to assess the damages to anyone.

3807. But if the harm is infinitesimally small the good is infinitesimally small?—To the debtor but not to the country. You must try to separate in your mind the question of the benefit to commerce from that of the temporary gain to individuals.

3808. Then what is the sufficient advantage which you admit to be a serious thing?—I wish to establish a par of exchange between all the constituents of this realm, that is the thing that I desire. The effect of alteration of prices is a subsidiary and secondary effect, harmful possibly to some (though as I say the difficulties of ascertaining it are great), but the advantage to commerce of an immutable par of exchange has been tried over and over again in the case of those countries that have had the same standard, and ought to be carried to those countries which have not the same standard now.

3809. Passing from this question of justice or injustice you allow that it is a serious matter to be considered?—Yes, that is my demand; I wish the whole question pro and con to be seriously considered.

3810. You defend the change on the ground of establishing financial relations between the commerce of the different parts of the empire?—Yes, and not only parts of the empire, but between the whole commercial world.

3811. You say the existence of an exclusively gold standard here and an exclusively silver standard in India operates by way of a bounty on the productions of India which are imported here?—I should not put it in that way. My answer was that a depreciated standard operated as a bounty, not the fact of there being a different standard.

3812. Well, we will put in the missing link then. The existence of a gold standard here and of a silver standard in India, coupled with the facts which have caused the depreciation of silver relative to gold, has operated by way of a bounty to the production of things in India?—Yes, I explained in my former examination that it operated by way of a bounty to me, and I was very glad of it.

3813. But you regarded that as a bounty that would not be permanent?—It would not be permanent for two reasons, in the first place that the wages and the cost of the necessaries of life would tend to rise in those countries, and in the second place that by degrees the advantage which they get is cancelled by the fall of the gold prices here.

3814. Do you consider that if the bounty were permanent it would be injurious to the people of Great Britain?—Yes, I should think it would if the bounty were permanent, that is to say, if they could always make a profit by sending produce here, produce that competed with our produce, I should say it was injurious to the people of Great Britain, looking not only at the producer but at the consumer.

3815. If produce that can be produced here can be permanently produced in another country at a cheaper rate and imported here so as to undersell the producer here, that would be injurious to the interests of Great Britain?—I think on the whole it would be injurious. Of course I see the benefit of it. It gives a man something much cheaper than he had it before, but if it gives him less wages in order to buy it I do not think it is much advantage. I see the good but I see a balance of evil.

3816. Does it not lead to this proposition, that the satisfaction of our wants at an easier rate is injurious to ourselves?—That our wants should be satisfied at an easier rate is of course an advantage. But you assume the satisfaction. That foreigners should be able to export their commodities at an easier rate is no necessary advantage to our people, if they cannot buy them at an easier rate. If such and such a thing be reduced to 3*d.* from 6*d.* it is very little advantage to the man if he has not got the 3*d.*

3817. But the fact that it is introduced and sold shows that it can be bought?—That is true. It will not be sent hither when it can no longer be bought,

and thus the evil may tend to correct itself. But we are all consumers, and not the working men only, and may continue to buy when he cannot. The effect is not directly on him, but upon the producer, and upon the general trade of the country, and thus indirectly upon working men, many of whom lose their employment and their wages, which is bad not only for them but for the country.

3818. Have you been in the habit of regarding the cheapness of sugar in consequence of foreign bounties as an injury to the people of Great Britain?—We do not produce sugar here. If we did I should say it was. In so far as we refine it, it is a great misfortune to this country.

3819. Do you speak of the people at large?—Yes, the people at large.

3820. (*Mr. Barbour.*) Do you think that the increased cheapness of sugar, due to the bounty on its production, is on the whole an evil, taking the whole world into consideration? Do you think, in short, that it is a good thing that the production of sugar should be stimulated by a bounty?—I cannot think that it can be a good thing.

3821. (*Mr. Courtney.*) You think that the production of sugar, so far as it interferes with a domestic industry here of refining, at all events, at a cheaper rate is an injury to the people of Great Britain?—So far; you must put stress on so far, but I do not say it may not be good, but so far as it hurts us it is an evil.

3822. And the importation of wheat from India at a reduced price, in consequence of a supposed bounty for its production in India, is an injury to the people of Great Britain?—So far again as it interferes with our production here.

3823. But the matter is comparatively immaterial, because these bounties are not permanent?—Happily.

3824. I come again to the question, is it not a very serious thing to propose an alteration of the law which affects the rights of debtor and creditor upon contracts entered into, in order to avoid the doubtful operation, whether for good or bad, of a bounty which is not a permanent one?—If that were the only cause, if that were the only doubt that I had, I should say it probably was, but because I think it is of the utmost importance to commerce that there should be an unity of money throughout the commercial world for other causes than that of the bounty on sugar or wheat, or whatever it may be, I think it is desirable, and I think we should not look too closely upon the infinitesimal gain or loss that there may be to debtor or creditor any more than our forefathers did in 1816 and 1797, in returning to what was the ancient law of England.

3825. (*Chairman.*) Do you think that the variations in the depreciation by embarrassing the trade tend to some extent to counteract the stimulus given by the depreciation? I understand you to say that one of the evils which embarrasses trade between this country and India is the variation in the exchange owing to the variations in the depreciation of silver. Well, I want to know if that operates in the other direction too, in the trade between India and us, whether the variations do harm?—Yes, I think it might, but then the main question is that the currency there as measured in gold has depreciated, and that the man is paying the same wages that he did before, although the coin which he pays is not nearly the same amount. Just as in Chili I pay two dollars, though the dollar is only worth about 2*s.*, whereas before it was worth 3*s.* 6*d.*

3826. But when once a point is reached that higher wages are also paid, which would be reached sometime or other, then you would have, according to your view, precisely the same variation of the depreciation?—I think it may be so.

3827. (*Mr. Courtney.*) I should like to recur again to those questions and answers we interchanged last time about Jersey. Suppose the case we started from; Jersey the only country bi-metallic, with a fixed ratio of 15½ to one, and both gold and silver in circulation; circumstances arise which cause silver to be produced with much greater swiftness and cheapness than gold. The producer of this silver taking it to the gold monometallic country, finds that the value of the silver is at once depreciated?—Yes, they do not want it at all.

3828. He carries it to Jersey, where he can get the gold at the ratio of 15½ to one, as long as gold exists in Jersey?—He cannot get gold in Jersey at all.

3829. Well, he carries the silver to Jersey, and he can get it coined there?—Into silver coin.

3830. Into silver, and by an interchange of the silver into commodities, and commodities into gold?—No, he cannot change his commodities into gold as of right. He gets it coined into shillings, which is the coin we will suppose in Jersey, sovereigns or golden shillings being also coin. The only thing that he could possibly do as of right is having got that credit to his name of so many thousand shillings in Jersey, would be to draw upon it, and sell his bill here. That is the only thing he could possibly do. It has nothing to do with the gold.

3831. We do not, I think, mean the same thing by the statement of facts. I suppose that when we speak of Jersey being a bi-metallic country with gold and silver in circulation, there a man having a credit at a bank, and going into the bank and saying, "I want 100*l.*," the banker would say to him, "Will you have it in gold or silver?"—Certainly not, unless it suited his (the banker's) purpose to say so.

3832. I admit that by law the banker could say, "I am not bound to give you one or other at your choice," but as long as the two things are in actual potential operation and circulation the transaction would be in that way?—This is what happens, not only in theory but in practice. If the banker does not like to do it, he says, "No, you shall give me two centimes in each napoleon, or 10," or whatever he pleases. It is at the option of the debtor, and must be so, and that is the explanation always of the agio. You could not have an agio if it was otherwise.

3833. (*Chairman.*) Would not he by paying some premium be able to get gold in exchange for his silver?—Certainly, it is at the option of the debtor to give gold or silver, therefore the debtor is quite entitled to say, "You must make it worth my while if I am to waive my rights."

3834. And in that way might not the country become denuded of the gold?—Yes; of course it could, and that I have admitted, and all along have admitted, that the banker may say after a time, "I am willing to take so much." He goes to a banker always, a banker is a necessity of life, and he says, "I must have so much of gold;" the banker says, "If you will have it you must, but you must pay for it."

3835. (*Mr. Courtney.*) The producer of silver, the man who has got his silver takes it to Jersey, gets it coined, and deposits it in the bank there. If he wants gold he has to pay a certain agio?—He may.

3836. And if silver gets more and more brought in he will have to pay a larger agio?—Yes.

3837. But by paying an agio he may, as long as gold is there, get gold and bring it out of Jersey?—Yes, I think he would ultimately.

3838. And in that process if Jersey is the only place where gold and silver are both coined, he can always, at the cost of the agio, which would probably go on increasing, get his silver exchanged for gold?—I suppose he can. Of course one may imagine that for one reason or another the Government of the country may not choose to part with their gold, and may put impediments in the way.

3839. The bank's agio would increase?—Yes, probably it would, but even then the gold would not all leave the country.

3840. What was in commercial life would?—Yes, I think so. That is what was the case in France.

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3841. So that ultimately you might, and if Jersey under the circumstances were the best place for disposing of your surplus of silver, you would ultimately get all your commercial gold out of Jersey?—Yes.

3842. Well, now, what would happen with the silver that was produced subsequent to that?—It would go into Jersey, and inasmuch as the produce of Jersey must very shortly be exhausted, (because when you compare it with the amount of silver that you are supposing, and that might be brought in from all other parts of the world, you must take not only the silver produced year by year, but the silver existing; you must take 700,000,000*l.* of silver we will say,) that would of course very soon exhaust the productive power of Jersey. There would be nothing wherewith to pay, that is all. Silver would go to the point of being used for making kettles or horseshoes or anything else; it would be simply a commodity like copper.

3843. Then would not it come to this, that the ultimate result would be a rise of prices in Jersey and a corresponding depreciation of silver outside Jersey?—I cannot say whether it would be a corresponding depreciation. Depreciation there would be and that would induce demand.

3844. So that ultimately you would get the same dislocation between gold and silver?—Yes, greater, infinitely greater of course.

3845. And the power of Jersey to absorb your silver and to maintain both in circulation would be lost?—Would be lost. I must repeat that the whole of this argument is foreign to the question, and is merely academical. The true example, as Mr. Birch said, is France, whose producing power would never be exhausted, and in fact was not exhausted in this century, though the precious metels poured in upon the country more than they are ever likely to do again.

3846. You said just now, I think, that it was for the benefit of the industry and commerce of the country that its circulation should be large and should be increased?—That it should be sufficient, and that it should increase proportionately to the population and the commerce of the country, not that it should be continually increasing, because that might, I suppose, produce other evils of a different kind, but that it should be abundant in the sense of being enough, and progressively enough.

3847. I should like you to explain why you regard it as beneficial to the country that its circulation should increase, say *pari passu* with the population?—Because I think that falling prices are always depressing both to trade and to the spirits of the trader.

3848. And rising prices are stimulating?—Rising prices are somewhat stimulating. One wants moderate stability of prices, and it is better that the tendency should be rather on the whole to the rise than to the fall; and I say that because all our experience has shown that a real increase of the circulating medium (not a forced increase) has coincided at all events with an increased prosperity of trade.

3849. Then your argument goes beyond increasing the circulation *pari passu* with the population?—No; what I mean is this, that trade has in former times not unfrequently languished by reason of the too great contraction by natural causes of the circulation, and has been stimulated again and brought back into a prosperous state by increased production of the precious metals, as was the case in 1853 undoubtedly, and I think has been the case at other times. Paterson states the case very well indeed in his "Golden Age." He states it in the different periods of history in which that has happened.

3850. I thought your argument was that a rise in prices, supposing it was real, not caused by an artificial expansion of the currency, was always beneficial?—No, I did not put it quite in that bald way, that a rise in prices was always beneficial, but that a fall in prices caused by a contraction of the currency is harmful for trade, consequently the increase of the currency to that point that is needed by the population and by commerce is for the good of trade. What commerce aspires to is not that such and such a thing shall be higher in price necessarily, but that there should not be that impediment to a natural rise in price, and not that tendency to a fall in price, which is caused by a curtailment of the measure of value.

3851. You want to prevent a diminution of prices?—Yes, a diminution caused by arbitrary acts. Prices will diminish and will rise from time to time, and that is no harm at all to commerce, but that there should be a continuous depressed and declining condition of prices is certainly bad for commerce generally, and particularly for all those people who have made contracts.

3852. Yes, but that at all events is a natural operation?—Partly. I do not want to fight against anything that is for the good of the world, or that comes by nature, but it is generally I think an evil for the whole world of commerce that the price should fall through a forced diminution of the medium of exchange.

3853. That comes simply to this, that you think that it is unfortunate for commerce and industry that the supply of the precious metal or the precious metals does not go on increasing?—*Pari passu.*

3854. Or subject to diminution?—*Pari passu* with commerce. I do not think it is desirable that they should increase if commerce fell off, and commodities fell off and population decreased. But I might retort this argument by asking if it is thought desirable that the supply of the precious metals should *not* increase—that it should diminish—and if so, to what point.

3855. Well, suppose the bimetallic law were established, you have already considered what effect it would have upon contracts; what effect would it have upon the production of the two precious metals, gold and silver, relatively?—Relatively it seems to me to be of very little importance what it would have. Positively it would have this effect of course, that if the precious metals were produced in such great abundance that prices were continually rising, prices of labour continually rising, the cost of the production of the precious metals would be greater than might be worth while incurring. The result of that would be that production would fall off, and the too great abundance would be remedied.

3856. At present silver is much cheaper if depreciated in value relatively to gold?—Yes.

3857. The establishment of the bimetallic law would be to increase the value of silver relatively to gold?—Yes.

3858. Would not the effect be, on the least profitable gold mines, to diminish their profits?—I doubt that extremely, except to the small extent to which the whole measure of value in the world would be enlarged. I doubt whether there is a gold mine in the world that is so worked that it depends upon the purchasing power of the metal extracted, whether it shall be worked or not; that is to say, I do not the least believe that the amount of labour consumed in getting out that gold from those mines would be so much greater by reason of the quantity of gold produced, or of the two metals produced, as to make them unworkable. It is conceivable, but I do not believe it.

3859. I do not know whether you can give any figure of your supposed appreciation of gold which would be corrected upon an adoption of the bimetallic law?—Oh no.

3860. You allege, of course, a very great alteration of prices in consequence of the monometallic law which is to be corrected by the adoption?—In consequence not of the monometallic law, but in consequence of there being no union between gold and silver, and in consequence of gold, which is our measure of price, being produced in less quantity, and being more in demand.

3861. But that alteration of prices is to be corrected either by the re-establishment, in operation of the Latin Union, or of some other union of bi-metallic law?—Yes.

3862. (*Chairman.*) I do not quite understand; do you assert as your view that there has been great decrease of price owing to the existence of the mono-metallic law here?—No; the mono-metallic law has existed here since 1816, safeguarded till 1873 by the bi-metallic law of France. What I assert is, that there is a considerable scarcity of gold owing to the falling off of the production of gold, and the greater demand for its use as money, and that, so far as scarceness or dearness of the measure connotes cheapness of the things measured, that involves a decrease of price.

3863. (*Mr. Courtney.*) Might I put it as high as this, that if, instead of the present system, we adopted a bimetallic law, or managed to set at work again the Latin Union, we should find a rise in prices of 20 per cent.?—Certainly not.

3864. Ten per cent.?—I will not say what; I suppose the general run of the fall in prices has been 25 per cent.; I imagine it has been so said, no one can tell exactly what it is, but if the fall in prices has been 25 per cent., I am certainly not disposed to put four-fifths of that to the account of the greater demand and the less production of gold.

3865. But it is desirable to know, in view of the alteration that we propose to make, it is desirable to know, if possible, the magnitude of the evil to be corrected, or the magnitude of the fall to be brought about by your proposed alteration; cannot you give any estimate?—No, I cannot, nor is it possible for any body to give any estimate. You may give an estimate, but it is sure to be a wrong one. But you are now speaking of price, and that is, as I have said, a secondary condition. I want to further stability of commerce between gold and silver-using countries.

3866. (*Sir T. Farrer.*) You would then not at all agree with what Mr. Manning says in his letter to the Congress last year that the price of all agricultural produce in England and in America would be raised 25 per cent. if we adopted a bimetallic system?—I cannot say that I agree or disagree, for I make no computation. I should be inclined to disagree if he says that that is the *exact* amount of the rise. No one can know either the precise rise which would be caused in agricultural produce in common with other commodities by the expansion of the measure of value, nor the precise amount of the much greater rise resulting from the removal of the stimulus to foreign production.

3867. (*Mr. Courtney.*) But supposing it did rise 12½ per cent., that would mean that gold was depreciated relatively to commodities to that extent?—That is quite a correct statement, because the gold is depreciated with respect to commodities wherever commodities are depreciated with respect to gold. That is to say, that whatever be the cause, it is appreciation of gold and depreciation of commodities. If you say it is 12½ per cent., and say that you adopt that as the quantity of depreciation caused by the specific appreciation of gold, that is the appreciation of gold in respect of gold, and not in respect of any increased production, facility of transport, or decrease of demand for commodities, of course that is so.

3868. I was not turning on the figure. Mr. Secretary Manning apparently says that if the bimetallic law replaced the monometallic system, certain commodities would go up 25 per cent.?—One would—silver.

3869. Apparently he says it of agricultural produce. That is the main thing he had in view. You, I suppose, would hold that commodities would go up something?—Oh yes, I presume they would. However you assess the *specific* appreciation of gold, so you must assess the augmentation of price, which the bimetallic system might produce, so far as it would counteract the now increased demand. This I have explained under question 3734. It would only operate so far as existing silver now unused would become money.

3870. Though you decline to fix the particular limit to which they might go?—I will not even say that commodities will go up any per-centage at all, because the one commodity that you would expect to rise in price might be reduced from some other cause. If they would not rise it would be because something would have caused them to fall *ab extra*.

3871. In speaking of the operation of this cause, we always speak of that cause detached from any other?—An addition of 12½ per cent.

3872. I do not care the least about the figure, 10 per cent.?—

3873. To that extent (10 per cent.) would not the value of gold relatively to that one cause only be depreciated with respect to commodities?—Yes, it is the same thing.

3874. And therefore would not the produce of an Australian mine be not quite in the same proportion, but in something approaching that proportion, be diminished in value?—Well, yes; inasmuch as the value of the gold that is produced by the Australian mine is the value of the commodities which it purchases.

3875. And therefore an Australian mine, if barely profitable before, would become unprofitable?—Yes, it might; but I never heard of such an one, and I do not believe in any such present amount of depreciation of the measure of value, by the admission of the now unused silver to its place as money.

3876. There are many on the margin?—I will not say that there are not, only I have never had any evidence either in respect of silver or gold. Strange to say, since the silver has been depreciated many of the mines that were not producing before have produced; but that is only the circumstance of their finding veins or not finding veins. Such evidence as I have heard has been against the fact of any mines having been abandoned by reason of the low price of silver; but I have been told that in some cases ores that have been brought up are put aside, because the value of the silver to be extracted is not sufficient to meet the expense of the chemical process of reduction. But this cannot, I think, reach to any very important amount.

Witness withdrew.

Adjourned till Friday.

Seventeenth Day.

Friday, 29th April, 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. HENRY CHAPLIN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, Bart.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, Bart., M.P., and
MR. GEO. H. MURRAY, *Secretary*.

Mr. J. S. Nicholson.

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MR. J. SHIELD NICHOLSON was called and examined.

3877. (*Chairman.*) You are professor of political economy in the University of Edinburgh?—Yes.

3878. You have given considerable attention to the subject of the currency and the relative value of the precious metals?—Yes, especially during the last two years. I may say that I took my degree in 1876, both at Cambridge and London chiefly in political economy. At that time I wrote one of the Cobden prize essays in Cambridge on a subject which was the effect of industrial progress on the rate of interest, and then I gave some attention to the historical aspects of currency. Since then I have studied it more or less in connection with my general work, but especially during the last two years, since it became a popular question.

3879. First of all with regard to the fall in the gold price of silver, will you state what in your opinion has been the cause of that fall?—Briefly expressed I should say it was due to the demonetization of silver by several nations.

3880. That is to say, to a diminution of the demand?—Yes. I do not think, that is to say, that the change that has undoubtedly taken place in the supply would in itself have had any effect upon the ratio at all.

3881. There has been some increase in the supply of silver?—Yes, so I understand, but still judging from the effects in former times especially, I do not think that the increase in production would have really had any effect in disturbing the ratio.

3882. Have you estimated at all what has been the increase in the production?—I have only taken the generally quoted estimates, and I have no means of estimating myself.

3883. But taking the statistics to which you have had access, do you come to the conclusion that you have expressed on account of the small extent of the increase of the supply?—No, not on that ground, but partly from theoretical reasons and partly by analogy from former times. For instance in the 16th century the relative production of gold and silver was suddenly reversed, silver becoming much more abundant, and yet the disturbance in the ratio was only from 11 to 1 to 12 to 1, although there the difference in the production of silver and gold changed from about 1 to 3 to 3 to 1. And then again, in the 19th century, gold increased in a similar way with no appreciable effect on the relative values.

3884. Are there statistics which you think can be relied upon with reference to the relation of the two metals at the former date?—As far as I understand the investigation was made by Humboldt in the first place and corrections have been made by Jacob, and ater by German writers. The figures that I quoted, were taken from an essay by Nasse in Schönberg's hand-book on political economy. I think they are generally accepted. At any rate arguments on all kinds of currency questions have been derived from these statistics. They are the best that we can obtain.

3885. Then I understand your view to be this, that the change in the supply in the direction of increase, though it has been much less than at the date you have mentioned, has produced a much greater effect, and therefore you do not think that the effect can be attributable to the increased supply?—Yes, that is my position. In my paper on the effects of great discoveries of the precious metals I have quoted the statistics on pages 46 and 47, of the production in the 16th century and in the 19th century. At page 46, I give the proportional amounts. "According to "the latest and most carefully compiled statistics I "have been able to obtain, in an essay by the cele- "brated economist Professor Nasse, the facts of the "case in the 16th century are broadly stated as "follows:—At the commencement of the 16th "century, the relative production of silver compared "to gold was about 34·3 silver to 65·7 gold, and "the relative values of the two metals were in a ratio "of nearly 11 to 1, the highest computation for the "value of silver being $10\frac{1}{2}$ to 1, that is, $10\frac{1}{2}$ to 11 oz. "of silver were worth 1 oz. of gold. In the course "of the century the proportion of the production of "silver to gold rose to 78·6, as compared with 21·4 "of gold, and the ratio of the relative values became "only by gradual stages 12 to 1," the relative positions of gold and silver as regards the total production changing in the meantime.

3886. How do you account for there being such a very slight change, and that only a gradual one with that very remarkable change in the relative production of the two metals?—I suppose it must be due to the fact that the silver was used mainly as standard money all over Europe, that it was absorbed as standard money; that it could be readily coined, while at present it is only taken as token money.

3887. But when you speak of its relation, was it then a fixed legal relation?—No, I refer to the market relation. As Dr. Soetbeer points out, the ratio fixed by the Mint regulations in various countries was determined by the previous market rate. (Materialen, &c., p. 23).

3888. But why should the market relation change so very little, scarcely perceptibly?—Because of the silver being absorbed as standard money. At the same time there was an enormous increase of the trade and commerce of the world stimulated by the increase of silver. That is brought out in the passage that I quoted, from Tooke and Newmarch's "History of Prices," at page 44 of this paper of mine on "The effects of great discoveries of the precious "metals." It is asserted by Tooke that, "We have

" the fullest warrant for concluding that any partial " inconvenience that might arise from the effect of " the American supplies of the sixteenth century in " raising prices, was compensated, and repaid an " hundred-fold by the activity, the expansion and " vigour which they impressed for more than one " generation upon every enterprise, and every act " which dignifies human life, or increases human " happiness." It is one sentence chosen from an essay in the form of an appendix to one of the chapters in volume 6, on the effects of the gold discoveries. It is intended to illustrate the effects of the gold discoveries by what happened in the case of silver in the 16th century.

3889. Yes, but I am not quite sure that I understand why if there were no fixed legal relation between the precious metals there should be this almost imperceptible change in the market relation, notwithstanding the immense discoveries of the one as compared with the other?—I should imagine it was due to the fact that the surplus silver instead of being thrown on the market to be sold as a commodity for making ornaments and so on, really was minted and used as standard money, and that in consequence of the great increase in trade at the time was principally absorbed as standard money. Therefore there there was really no very great addition to the supply which would govern the market price.

3890. But would it not come into the market in the first instance? How would it get to the point of being minted. Would it not in the first instance be bought and sold?—I believe silver was the principal standard coinage at the time all over Europe, so that silver bullion would not be bought as at present with gold. One would naturally have expected a rise in the silver price of gold bullion, and I presume this did not happen, because so much silver was required for commerce. As matter of fact the distribution was rather curious. It came to Spain in the first place, and Spain tried to keep the silver to itself. But it was gradually distributed over the world, through commerce, especially by the Dutch, and it acted really as money in settling international transactions. I have not investigated that part of the subject in detail, but I simply take the fact that there was a great change in the supply, and that there was no corresponding change in the ratio, and I presume that it must be due to the fact that there was a large demand for currency purposes. Similarly, Dr. Soetbeer ascribes the great change in the ratio in the 17th century to the greater demand for gold, and not to the over-supply of silver.

3891. Still one can hardly arrive at a satisfactory conclusion from a comparison of the change in the relative production at those two epochs without going into the circumstances of each epoch to see how they affected the case?—No, I should not rely simply upon the facts. I think it would be most illogical to argue simply from two facts to a general theory, but still these facts from the 16th and the 19th centuries do illustrate the position that you may get a very great change in the supply with a very small effect on the ratio; and the few facts that we have to go upon are evidence in favour of the view that the demand is the most important.

3892. (*Sir T. Farrer.*) Do we know that at that time silver was very much more used for currency than gold?—That is my impression.

3893. But you do not know it as matter of fact?—In England, Jacob states that from 1272-1509 the silver brought to the Mints was 1,185,198*l.*, and the gold, 446,908*l.*, and certainly all countries used silver as standard money.

3894. (*Chairman.*) You come, then, to the conclusion that there was not sufficient difference of supply to account for the change in the gold price of silver?—Yes, and I believe it was established in the report of Mr. Goschen's Committee that the fall could not be attributed to the increase in the supply.

3895. Therefore you turn for the explanation to an alteration in demand?—Yes.

3896. You find that alteration in the demand, as I understand, in the demonetization which took place in 1873 by Germany?—Yes, followed by the changes in other countries, such as the Latin union ceasing their free mintage of silver.

3897. And what other element do you take into consideration?—Then Norway and Sweden, I think, changed their currency at the same time; and in the United States there was the adoption of gold currency with a subsequent modification by the introduction of the Bland Act. Then there was also the additional demand for gold due to the change in the policy of Italy, substituting gold for inconvertible paper.

3898. Those are matters that would affect the value of gold. I was rather dealing with the change in the gold price of silver resulting from the changes in relation to silver?—I should say a lessened demand for silver, the change being not only in degree but in kind; that is to say, that a demand for silver for token money is not the same as a demand for silver for standard money.

3899. Before we go into that, I understand you to point to this, that there was also some change in the demand for gold, an increase in the demand for gold?—Yes, owing to the substitution of gold for silver, or for notes, as the case might be.

3900. But which do you consider the important element, the diminished demand for silver or the increased demand for gold?—I never tried to separate the two, that is, in estimating the effects of the demonetisation of silver.

3901. You deal with them together?—Yes. Silver was sold for gold, and less silver was wanted for standard money. Thus there was a greater demand for gold than for silver.

3902. I am now speaking of the depreciation of silver as compared with gold, not of gold in relation to commodities at all?—I should look upon that as as due primarily to causes affecting the relative demand for currency, rather than to causes affecting the appreciation of gold relatively to commodities.

3903. So far as that is concerned, it would affect silver, as I understand you, only in the same way that it would affect other commodities?—Yes, the appreciation would only affect silver so far as it would affect other commodities, if silver is regarded simply as a commodity, but then there are special causes at work which would depreciate silver.

3904. I think we had better keep those two entirely separate. You would agree probably that the question of the general appreciation of gold in relation to commodities may be dealt with as an entirely separate question from the question of the depreciation of silver?—Yes, I generally do treat them separately in anything I write on the subject.

3905. Then we will continue our investigation as to the depreciation of silver, deferring the other question till afterwards. You say that the monetary changes to which you have alluded have diminished the demand for silver?—Yes.

3906. And, therefore, the result has followed which you would have expected, that the price of silver has fallen?—Yes.

3907. You suggest that the fall in prices may affect the amount of silver that is required even for token money?—Yes, but that is bringing in the question of the appreciation of gold, and rather refers to the future. It seems to me that, supposing there is a great fall in prices which would be expressed by the appreciation of gold in the gold-using countries, then so far less token money will be required. You do not require so much money to circulate commodities when prices are low as when prices are high, so that in this case there would so far be a diminution in the demand for silver for token coinage. If all prices fell, we will suppose a half, then I would imagine that less token money would be required. I do not know that the change would be exactly proportional, but less token money would be required to circulate commodities just as less standard money would be required.

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3908. Might you not want more of your token money, because there would be a greater demand for smaller sums. Supposing you had no half-sovereign coinage at all, but only a sovereign coinage, and then your sovereign became appreciated, and prices fell, would not there very likely be a greater demand for token money, because there would be more transactions in which you would want the smaller coin?—Yes. I did not consider it in that light, I simply considered the question from a kind of necessary proportion between prices and the quantity of money, and, I confess, I assumed this without thinking of the point you mention.

3909. (*Mr. Courtney.*) Suppose it were necessary to resort to the use of farthings in purchasing commodities; we do without farthings now, but we should be compelled to have farthings coined?—Yes.

3910. (*Chairman.*) Then another aspect of it is that you might have lower prices and a largely increased number of transactions?—Yes, of course, that would be possible.

3911. Then we should require more token money, and not less, should we not?—Yes, so far, but then I do not see that there would be any connexion between the fall in prices and the increase in the number of transactions.

3912. No, I am not suggesting that necessarily you would have an increase in the number of transactions because you had lower prices, I am only suggesting that one must not assume the contrary as matter of fact?—No, not as matter of fact. I am only assuming that the effect of this particular cause would be that less silver money would be required if prices fell. Of course, at the same time, the number of transactions might increase. In this way the cause mentioned might be entirely neutralized, even though it operated in the way I thought.

3913. (*Sir T. Farrer.*) Have you at all verified, or attempted to verify, that supposition by reference to the actual quantity of silver coined in European countries and the United States?—No. I do not see how verification would be possible, because there are so many other causes which would have to be taken into account that one could not get direct evidence; for instance, the increase in the number of transactions just mentioned.

3914. The coinage is always a very uncertain thing, is it not, because coin may be remelted, so it is an uncertain statistic?—Yes.

3915. But so far as that goes, according to Dr. Soetbeer's tables, it would appear that the quantity of silver coined in those countries from the years 1876 to 1880 was very considerably larger than it had been in any previous years?—Yes; I remember seeing that; but I think the recoinage is not accounted for.

3916. Well it would appear that, to take the time just before the German demonetization from 1866 to 1870, the coinage of silver was 1,172,180 marks; in the next period 1871 to 1875 it was 1,387,908 marks; in the next period 1876 to 1880, 1,738,499 marks; and in 1881 to 1885 it fell off to 1,120,312 marks; but the proportion of silver to gold continued much about the same all through those periods?—Yes.

3917. (*Mr. Barbour.*) Was there not in those years a large substitution of small silver coin for other forms of currency?—Yes, and I think the figures are vitiated, from the fact that no account is taken of re-coinage.

3918. (*Sir T. Farrer.*) The whole does not show a falling off in the quantity of silver coined for token coinage?—No; but at the same time there has been in Germany, I believe, an increase in trade, and that of itself would require more token money, and more money of all kinds.

3919. (*The Chairman.*) Do you know whether there was a great difference in the amount of token money in this country as between say, the time prior to 1873 and the time subsequent to 1873?—No; I do not know as matter of fact.

3920. Your view is that countries where silver is standard money cannot obtain it except in payment for commodities. But the prices of their commodities are falling in the western markets, and thus silver is not absorbed in such large quantities; does that result from the depreciation of silver?—Yes. The question is sometimes put, how is it that since silver is depreciated it does not flow in large quantities to the East? Well, I should say, that the effect of the depreciation lowers the prices of the Eastern produce, and therefore, so far less silver is due to settle the balance of trade.

3921. And the price of the commodities exported from silver-using countries is also falling?—Thus, so far as that cause is concerned, less is due. Of course I am taking the question analytically, and taking one cause at a time, if the exports from silver-using countries have fallen in price, then so far there is a less balance due. If prices had remained as before, then the exports would have increased in value, and very much more silver must have been sent.

3922. (*Mr. Birch.*) If the volume of commodities was greater, the price being the same, they would draw more silver, of course?—It depends upon the extent to which prices fall.

3923. Therefore it is not a fixed rule?—No.

3924. (*The Chairman.*) One of the points that you make is, that the fall does stimulate the exports very largely?—Yes. I have no doubt that on balance there is an increase in the amount of silver sent so far as this cause is concerned. That would show that the exports increased in volume more than they fell in price; but still this fall in prices is one cause, it seems to me, which ought to be taken into account in explaining how it is that silver has not gone at once in large quantities to the East.

3925. At all events your point would be that although it stimulated the exports, yet the full effect of that was not felt in attracting silver because the exports sold at a lower price?—Yes.

3926. (*Mr. Courtney.*) They sold at a lower price measured in what?—Measured in silver. That is to say, they obtained less silver than they would have done but for the fall in gold prices.

3927. Taking a concrete illustration, that the export is brought from India to England, are you saying that the prices are lowered in the English market?—If prices on this side remain steady, then very much more silver, silver being depreciated, would be obtained than is the case at present; but this depreciation of silver lowers the gold prices of these commodities on this side.

3928. Well, if they are lowered in this market in gold, and silver is lowered in this market in gold, it might possibly happen that silver and the commodities themselves may remain in the same ratio?—Yes; that might happen certainly.

3929. Then would your reason against the export of silver to the East still hold?—Simply taking the effect of one cause so much silver is not sent as would be the case were it not for the depreciation, if the volume of trade increased in the same manner.

3930. (*Mr. Fremantle.*) But if silver were depreciated as regards commodities, you would require more of it in payment of the commodities in the East, would you not?—Yes; that is, if silver prices in the East had risen, but I was assuming they remained steady.

3931. (*Sir T. Farrer.*) You mean that if gold prices had remained as high as they were, and silver had depreciated, then a larger amount of silver would have been needed?—Yes; that is the point.

3932. (*Mr. Birch.*) That is provided always the same quantity of commodities had come?—Yes. I thought that was the assumption made by Mr. Bagehot and others. They supposed that prices on this side would remain the same, and in consequence large quantities of silver would be due. But prices do not remain the same owing to the prior depreciation of silver.

3933. (*The Chairman.*) When did the last of the causes to which you attribute the change in the value

of silver relatively to gold take place; the demonetization by Germany was in 1873, the French ceasing to mint was shortly after that?—The suspension of the coinage by the Latin Union took place very shortly after the German demonetization.

3934. Would you not expect the effect of the changes from these causes to be developed to its full extent at once or in a limited time, and afterwards that matters would settle down to a condition of equilibrium?—You mean that silver should have fallen at once 20 per cent., and then remained steady. Well I should say because silver no longer being used as standard money, at least not being freely minted as standard money on this, side then there is not the same demand for it, and a very small addition to the supply being thrown on the market as a commodity, that operates upon the price. At this stage the supply does come in, only it comes in under different conditions.

3935. Therefore, the subsequent changes and fluctuations you would attribute to the changes in the supply?—Very largely to changes in supply, but of course also you might get the operation of any sudden change in demand. I believe recently there was some oscillation upwards in the price of silver owing, it was explained in "The Times," to some demand on the part of France for Tonquin.

3936. (*Mr. Barbour.*) Then you think that in the present state of affairs the price of silver for the time being would depend a good deal on the balance of indebtedness between the East and the West?—If there is a demand for silver, then it will depend a great deal upon that. It also will depend a great deal upon the supply. The changes in supply would operate considerably now owing to the change in the demand being a change, not only in degree, but in kind, that is, the silver cannot be minted freely, so that practically it all of it becomes a commodity in the Western markets.

3937. (*Mr. Fremantle.*) But then to what would you attribute the fact that since 1878, when the Bland Bill was passed, notwithstanding that 5,000,000*l.* sterling have been coined ever since by the American Government, there has been still a great and continuous fall?—I should say it must be largely due to the increase in supply relatively to the total demand.

3938. (*The Chairman.*) That change, the mintage of 5,000,000*l.* a year, you would have expected to make, would you not, other things being equal, a change in the price, a tendency upwards?—And I have no doubt that it did, so far at any rate, prevent silver from falling so much as otherwise it would have done. I imagine that if the Bland Act were suspended to-morrow, there would be a considerable further fall in the price of silver, and so, I presume the passing of the Bland Act checked that fall.

3939. (*Mr. Barbour.*) Do you know whether at the time the Americans began to coin silver largely, there was a considerable cessation in the coinage of silver in Europe, which may to some extent have counterbalanced the coinage under the Bland Act?—Yes, I should think that was the case, but at the same time I cannot refer to the facts, and it seems to me the facts are difficult to follow owing to the question of re-coinage.

3940. (*The Chairman.*) If I remember the figures that were given, there was a considerable fall which went steadily on after the Bland Act was in operation?—I should only say, that taking one cause at a time, that Act must so far have prevented the fall from being so great as it otherwise would have been. It caused the absorption of a certain amount of the silver. If that silver had been thrown on the market it must have lowered the price. But of course it might have been counteracted by other causes.

3941. What rather struck me, looking at the figures, was, one saw a progression downwards in the price of silver, and hardly saw any sufficient change in the supply to account for it, considering that the Bland Act came into operation?—Well I should only say that had it not been for the Bland Act the fall must have been greater; I do not see how it could have been otherwise, but at the same time the price of silver would depend upon so many causes and so many changes in the demand of various kinds, that it is quite possible that they might more than have neutralized this absorption of the supply through the Bland Act. It seems to me always so very difficult to argue from any single fact to the general question.

3942. As I understand in your view this depreciation of silver is likely to remain permanent, so long as the existing monetary arrangements continue?—Yes, I do not see any reason why it should rise in price to the former level.

3943. Except by a considerable diminution of production?—Except, of course, if there was a considerable diminution of production, or, of course, it is possible that there might be a very great increase in the demand for the purposes of the arts, if wealth were more evenly distributed, and a large amount of silver was used in that way.

3944. (*Mr. Fremantle.*) And large discoveries of gold would have the same effect?—I suppose large discoveries of gold would have to some extent that effect also.

3945. (*The Chairman.*) Then under present conditions you anticipate a continual downward tendency in the price of silver, and, subject to that downward tendency, frequent fluctuations?—Yes, in view of the apparent increase in recent years in the supply of silver, the want of a demand upon this side for the purposes of coinage, and the comparatively small export to the East at present, a further fall seems possible.

3946. (*Mr. Courtney.*) You anticipate a further increase of supply?—Not a further increase, for I have no means of judging, but the amount actually produced at present, if that continues, is more than can be absorbed on this side, I should suppose. But I should certainly expect constant fluctuations in the price.

3947. (*Mr. Birch.*) Have you any particular reason for looking forward to those constant fluctuations?—The price of silver is determined by the changes in the demand and supply practically in the London market, and there constant changes will occur. There is no reason to suppose that the demand depending upon various elements will exactly balance the variations in supply.

3948. (*The Chairman.*) Before these monetary changes were there fluctuations in the price of silver?—Yes, there were fluctuations between 1803 and 1874, but I believe that these fluctuations were at any rate very small. I think they have never been more than 2 per cent., and they were probably due mainly to causes affecting the exchanges between different countries.

3949. Apart from the question of the downward tendency, do you think that the fluctuations are likely to be greater now than they were then, that is to say, the slight changes resulting from changes of demand or changes of the rate of exchange?—I should think that the conditions being altogether different, we should expect much greater fluctuations, and more frequent fluctuations, because, whilst France was bimetallic, that practically steadied the price.

3950. What have you to say with regard to the question of the evil caused by the depreciation of silver?—It seems to me that it is necessary to separate the two questions of the appreciation of gold due to the fact that gold does the work formerly done by silver to a large extent, and the question of the depreciation of silver, and the fluctuations in the price of silver affecting international trade particularly.

3951. Before we come to the evils resulting from the appreciation of gold, will you state what are your grounds for asserting that there has been an appreciation of gold in relation to commodities?—In the first place the ordinary calculations founded on the index numbers which show that in a large group of commodities, at any rate there has been a fall in prices; and then I should myself found a good deal upon the

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want of expansion in the revenue returns showing that there must have been general appreciation, not only as regards those commodities on which index numbers are founded, but as regards commodities generally.

3952. With regard to the commodities which have been dealt with by index numbers, there have been several different groups formed, have there not?—Yes.

3953. The "Economist" group, I think, consisted of 22 articles, and the Hamburg group of something over 100?—Yes.

3954. You do not find, whichever group you take, anything like an universal fall of prices in all the numbers of the group?—No, not in the same degree.

3955. Not only in degree, but you find some of the group rising during the time others have fallen?—I should think it is quite possible. I do not remember at this moment if any commodity has actually risen during that period, but I should think it would be quite possible.

3956. It is possible entirely to alter the results arrived at, is it not, by leaving out one or two of the elements of the group, I mean as to the results at particular dates?—I should think in those particular cases, comparing the prices between 1874 and the present time, that you would not change the result very much by leaving out one or two of the items.

3957. In the two or three years immediately preceding 1873, was there not a very great rise in the price of particular commodities that are largely dealt in?—Yes, I believe so.

3958. But you would not attribute that great rise of price which took place in the few years preceding 1873 to any monetary change, there had been no more gold discovered?—No great quantity, and no important metallic monetary change.

3959. It would be attributable, would it not, to the great demand that there was owing to speculation and the number of enterprises that were started?—I suppose the great rise in coal and iron would be largely due to that, but I should also imagine that the expansion of prices was largely due to the after results of the Franco-German war, leading to a greater demand for commodities from this country to replace the capital destroyed or disorganized in France and Germany.

3960. Would you not have expected, entirely independent of the monetary changes of 1873, that if speculation had exhausted itself, and people had come to be less willing to lend their money to speculative enterprise, and if other countries had supplied themselves freely enough, prices would have fallen quite independently of any monetary change?—Yes, I should fully expect that, because that seems to me to follow on the analogy of all the periods of expansion that have taken place over more than a century. You get nearly every 10 years a great expansion followed by a necessary reaction, the expansion being due largely to the inflation of credit. But then I should have expected also, had it not been for this monetary disturbance, that a recovery would have taken place, such as appeared to begin in the autumn of 1879 and beginning of 1880.

3961. Would not that to some extent depend upon whether credit had revived, and people were willing to trust, for example, foreign States whom they had trusted before, but were not quite so ready to trust now with their money?—But the history of at least 100 years seems to show that you would get such a revival of credit in a much less time than has taken place since 1874.

3962–3. But what I would call your attention to is this, which, I think, may be worth attention: In the previous crises, you have had financial difficulties, which have led to the failures of banks, and so on, through overtrading, and it has taken some time before confidence has been revived, but was not a feature of the break up of confidence about that time, that it arose not from banks failing, or great financial or mercantile difficulties, but from people ceasing to trust foreign states that previously had executed great works by means of the money which they derived from this country?—I have no doubt that was an important element; but in other crises also an important feature was the advance to foreign states of loans for different purposes. Such was the case in 1825 and in nearly every crisis since foreign influences have been felt.

3964. (*Sir T. Farrer.*) And is not this feature peculiar to the last crisis; take the article of coal to which you have alluded, would not the result of the enormous price of coal cause an immense deal of capital to be expended in the development of coal mines?—Yes, I should think so.

3965. And is it not the result that coal is only recovering its previous position, and the coal miners have been since permanently injured, and that they have not yet recovered—the demand has not yet reached the supply?—I should think that is probably true as regards coal.

3966. Iron depends upon coal largely?—Yes.

3967. And that would follow, probably, the same rule?—Yes.

3968. Again, is it not the fact, that the great boom in shipping during that period, has caused an immense over supply of shipping, and the demand in that case has not yet reached the supply?—There is certainly a great increase in shipping, but I am not able to say at present whether the supply is greater than the effective demand.

3969. (*Chairman.*) With regard to iron, I do not know whether you are aware that an enormous number of new furnaces were erected, and there was an immense amount of extra production at that time?—Yes, I am quite prepared to admit, that if you take a number of very important commodities, you, no doubt, may explain the fact of the fall in prices by purely relative causes affecting those particular commodities, but then it seems to me that when the fall pervades the total mass of the commodities, you cannot arrive at the causes simply by examining the relative combination of the demand and supply of a few particular commodities.

3970. But take the case of the great increase of carrying facilities which was brought about by that speculative period, in the making of the large addition to the railway system in foreign countries; would not that of itself tend to some extent to bring into the market a great increase of commodities which would tend to reduce prices. If you had a very rapid increase of carrying facilities, would not that tend to flood the market with commodities which would be likely, if in excess of the demand, to diminish the value?—I have no doubt that would operate in that direction, but I should think it was not a sufficiently general cause to account for the universal fall in prices.

3971. But has there been an universal fall in prices? That is what at present, I think, we have no evidence of. Some prices have fallen very much indeed, and if you take a number of articles and look at the total result, setting rises against falls, you will get a large fall; but then, would it not be perfectly possible to find an efficient cause for each one of those fallings in price, without any general cause affecting the whole? You do not suggest that there is to be traced anything like an universal fall of prices of all commodities?—Yes, I should say that there was a general fall in prices of all commodities. Of course, the fall is not uniform.

3972. But that is exactly the point that I want you to throw further light upon. Might it not be true that there is a fall upon the whole, and that fall upon the whole only results from setting falls against rises and arriving at the total result, and yet that there is an efficient cause for each fall apart altogether from any general depreciation?—But every particular price depends partly on general and partly on relative causes. You see that best with inconvertible paper. Some prices might fall for special reasons, in spite of a general rise through depreciation. Besides, I should argue that if the fall were due simply to these relative causes of themselves, a reaction must have set in long before this.

3973. Take coal for example. Are you aware that a year or two prior to 1873, an immense number of new collieries were started?—Yes, I believe so.

3974. And are you aware that they came into operation after the depression had begun, and the demand had diminished?—Yes, I should imagine that was the case.

3975. Would not that be likely for a considerable time to cause low prices in that particular article if that had taken place on a large scale throughout the country?—Yes, I should think so. I should be quite prepared to admit that as regards that particular article. I have no doubt that as regards many commodities that might be the case. But still I cannot understand how this fall in prices can be due purely to relative changes in supply and demand.

3976. Of course you would agree that a great increase of carrying facilities would tend to bring into this market large quantities of commodities which would not otherwise come if freights were very low, for example, and you had a very large number of vessels seeking employment?—Yes, I suppose it would if freights kept low.

3977. Then, taking the other result, which you suggest from the depreciation of silver, namely, the stimulation of export, we will suppose, of corn from India. Would not that, quite apart from any general appreciation of gold in relation to commodities, of itself be sufficient to bring down the price of corn?—Yes, quite so. I think that in some cases the fall in prices is due directly to the depreciation of silver. I should like to add that I do not rely only on the index numbers, but I was partly confirmed in the view that there had been a general fall in prices by applying the method that I have used in the paper published in the "Statistical Society's Journal," March 1887. This depends in its practical application upon the revenue returns, or rather the gross assessments for the income tax returns, where you have no expansion on the whole; and I should say that the want of expansion could only be explained by the fact of a general fall.

3978. But you have had a great expansion, if you take the present time as compared with twenty years ago?—Yes, but not taking into account the increase in population and the increase in the volume of trade. So far as I could get evidence, the increase does not seem so great as it ought to have been, but for a change in the level of prices.

3979. Let me ask you this: In what way do you think a change in the volume of gold for currency affects the prices? Supposing that to-day a bargain is being made for any commodity you please. The buyer and the seller will consider probably what price it closed at yesterday, and they would anticipate with regard to future supply and future demand, whether trade is likely to be brisk, and so on. All these considerations will enter in, and then they will fix the price to-day. The same operation will go on to-morrow, and also day by day, say, for a couple of years. Supposing that during that time there has been a change in the volume of gold; say, a decrease. Where does that touch any of the transactions? It is not a point which would be considered in any of these daily bargains which I have suggested; and how, if nobody considered the question of the volume of the currency, does it touch the price?—I think it may operate in one or two ways; in a country with highly-developed credit institutions, the contraction of the gold supply might operate on the reserves of banks; the consequence being a rise in the rate of discount, and then it would be difficult to obtain the same advances of capital, and there would be in that way a fall in price such as is constantly exemplified. That is one way; but then there does not seem, so far as I can gather, to be any evidence that there has been such a drain on the reserves in this country.

3980. Is not the evidence exactly the other way—that money has been so cheap during all this time?—Yes, and not only as regards this country, I believe, but as regards the other National Banks, there has been apparently great abundance of gold, so that it cannot, it seems to me, have operated in that way. At the same time it must be observed that with falling prices there will be a lessened demand for advances, and also that even low rates are more onerous. But then there is another way in which the quantity of gold can operate, and that is, because in some places it seems to me the currency is directly connected with the level of prices. In countries where there is very little credit, there the level of prices depends really upon the actual quantity of money in circulation. If this depression set in to a large extent in these undeveloped countries (and that seems to be the view taken by Mr. Giffen, in his essay on the depression), it is just in those very countries where there is very little credit and where the contraction of gold would make itself felt directly. I should have said also that there is no sharp line between developed and undeveloped countries. All the latter have some banking, and their banks may have had insufficient funds, and have been unwilling to lend. Then if there is a fall in the price of any important staple commodities, even in those undeveloped countries, that fall will be reflected to other markets, so that we may get the contraction of gold operating directly through the want of circulating medium, in some place or other; but it does not matter really where it operates, owing to the great inter-connexion of markets in modern times.

3981. But that would not depend upon any appreciation of gold here, it would only be that a particular country offered its commodities at a lower rate, and that brought down the price of those commodities?—But then I should say it is impossible to consider the value of gold, taking one country alone; you must take the value of gold in the sense of exchange value. It is necessary to take all the countries which have trading connexions.

3982. Then, if you do that, does it matter in which country the gold is, if you are to look at the total quantity of gold in relation to the total quantity of commodities in trade?—Yes, I think it does.

3983. It would not have occurred to me that it would matter whether Germany had this additional quantity of gold or not, if the same quantity of gold has found its way into the currency somewhere?—But you require a certain amount of gold as reserve, and you require a certain amount of gold as currency and supposing that for the currency, which was formerly silver, you substitute gold, then you must take that gold from some other place, so that you then have less gold altogether for currency compared with the commodities.

3984. Yes, but if these undeveloped countries were silver-using countries, no such effect would be produced, because they would have all this silver set free?—If they were all of them silver-using countries, then it would not have that effect; but I should say that there are different undeveloped countries which use gold—our colonies, for instance—and there are always certain parts of other countries which must be considered as undeveloped, also where you require gold.

3985. (*Sir T. Farrer.*) You may say that as regards the gold in the reserve in the highly civilised countries, there is as much of it as there ever was, if not more?—I believe so.

3986. And that the guardians of that gold have no greater difficulty—rather less difficulty—in maintaining and replenishing their reserve?—I believe that is the case with the present demands of trade, and the present state of prices.

3987. It is a thing we have been always taught to believe, that gold will flow from the countries where it is less wanted to the countries where it is more wanted, and if there is a deficiency of gold in those undeveloped countries, would not that tell upon the reserves of the civilised countries?—I do not see how these undeveloped countries are to draw upon the reserves of the banks of this country.

3988. Take Australia, which is one of the few undeveloped countries that uses gold; if there was really a deficiency of gold in Australia, would not the

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effect be either to stop the transport of gold from Australia to this country, or to draw gold from the banks in this country to Australia?—It depends on the way in which the deficiency was felt in Australia. I suppose if there was a deficiency felt by the Australian banks which resulted in a very high rate of discount in the Australian banks, that would tend to draw gold from this country.

3989. Or if the price of wool was to fall very much in Australia?—I do not see how that would attract gold from this country.

3990. Or a general fall in prices?—I do not see how that would necessarily attract gold from this country.

3991. (*Mr. Fremantle.*) Are you aware of the fact that a year or two ago, there was a balance of export of gold in the year to Australia?—Yes, I had that in my mind when I spoke about the rate of interest.

3992. (*Sir T. Farrer.*) When I say a fall of prices, I take it upon your hypothesis that prices are connected with gold. If, upon your hypothesis, prices fall in Australia would not the result be a large purchase of Australian goods, and an export of gold, from this country to Australia?—Well, if there was a large purchase of Australian goods, the point would come in there again that I mentioned before, if the price had fallen in Australia, so far, less would be due. It is possible then, that our exports might still balance the exports from Australia, and that no gold might be due on that account. Of course, I admit the general theory that a relative fall of prices in any country stimulates exports, and thus tends to turn the balance of trade in its favour.

3993. (*Chairman.*) Supposing that the view you have suggested be the correct one, that in these undeveloped countries, there being a scarcity of gold, prices fall, and so things sell at a lower price, would not the extent to which that affected prices generally depend upon two things, first of all, what the commodities were in which those countries dealt, and next the volume of commodities in which they dealt, as compared with the general volume of those commodities?—Yes, I suppose that must be so. It would be very difficult to estimate the total effect.

3994. But taking Australia as an instance, what are the commodities in which you would suggest that that effect would be produced?—I suppose the most important Australian export is wool; well then, I should imagine that the relative deficiences of gold in Australia, compared with the amount that there was before, might lead to there being less circulating medium in the country, and, consequently, less wages paid to the shepherd, and so on, and ultimately a fall in the price of sheep.

3995. Of course the wool produced in Australia is much more than would be used for any Australian purpose. Supposing there was a very largely increased production of wool, would not that equally account for the fall in the price of wool?—Yes, I should think so, certainly. But I only take that as an example. I should say that to illustrate from the converse case, if we look into the effects of the great gold discoveries in Australia, we know at the time they were made there was an enormous rise in all prices in Australia in 1850.

3996. Yes, but might not one give a very good explanation of that without supposing that it depended on the increase of the volume of the currency, for instance that it arose from the number of people who went out there, the activity produced in shipping, and building railways, and so on. All that one can quite understand independently of any change produced in the volume of the currency?—But I should say that it would be impossible to maintain this high level of prices, unless you had currency to circulate the commodities. If you had attempted to circulate the commodities on any credit system, that would have produced a strain on the banks, and one did occur, producing a great financial crisis in Australia. It really was necessary to have a large quantity of gold coined in order to support that high level of prices.

3997. But still, supposing some effect were produced in that way, you would not suggest, would you, that the change in prices bore a percentage proportion to the percentage increase or decrease in the volume of currency as compared with commodities?—No, I do not think we can get an exact proportion, but I express it rather by saying that the general level of prices is a function of the volume of gold, though I cannot say what precise function it would be.

3998. The more extended and perfect the system of credit, the less its effect would be?—I should not like to answer that question on the spur of the moment; it seems to me so very complicated the way in which the gold affects prices, when you take into account a highly organised system of credit. For instance, supposing the amount of gold which was generally deposited with the great national banks were doubled, it seems to me that it might possibly make wholesale prices rise only very little, or it might in certain conceivable cases make them rise greatly, but we could not say at once what the effect would be. In the converse case it is easy to see how a drain of gold might affect prices more than proportionately.

3999. But supposing that the transactions were carried out by an actual exchange of gold for commodities, the relation between the change in the quantity of gold, and the change in the prices of commodities, would be much more direct and constant, would it not?—Yes. I should think under hypothetical conditions that you might lay down that it would be exactly proportional, the change in price to the change in the quantity of gold. I have described the conditions in my essay on "Money."

4000. But when it is stated that prices depend on the relation of the volume of the currency to the volume of the commodities, does not that rather assume that all transactions are carried out by the direct exchange of the commodities for the currency?—I do not think so, because you have to consider also the amount that is required by the banks as a reserve.

4001. (*Mr. Courtney.*) Might I put a rather fanciful illustration that might perhaps bring out your view. Supposing the Government suddenly possessed themselves of a treasure of 10 millions of sovereigns coming from nowhere, and could dispense in consequence with the collection of the income tax for one year; and that an additional 10 millions of sovereigns were thus thrown on the market, through the Government making its payments, and not drawing from the taxpayers, as hitherto, those 10 millions, what would you conceive would be the effect upon prices?—I think there would be so far a rise in prices.

4002. Can you suggest any proportion of any kind?—I cannot suggest any proportion at all.

4003. Would the effect be different from the result produced if instead of having that 10 millions of sovereigns so discovered the Government issued 10 millions of inconvertible notes?—I should think if they were inconvertible notes, it would operate in the same way. If they were convertible notes of the same denomination as those already in use, I should think, probably, they would not circulate, because the number used is proportionate simply to the convenience of people.

4004. The hypothesis is that the Government is issuing these notes, which are undistinguishable in form, appearance, and declaration from the ordinary notes, and are being taken in payment of the demands of the Government?—To carry out the hypothesis so long as they remained in circulation, and were practically inconvertible notes, they would raise the general level of prices.

4005. You would not say in what proportion?—I would not say in what proportion.

4006. (*Chairman.*) Let me take the hypothesis Mr. Courtney has put of the 10 millions which the people have to spend instead of paying it in income tax; would the effect upon prices arise from the fact that the people had so much more to spend upon

the articles they wanted, and, therefore, there would be so much more demand for the articles?—I should think that is the form it would take.

4007. Then would not the extent to which that affected prices depend rather upon the proportion which 10 millions bore to the general spending power of the community than upon the proportion which 10 millions bore to the amount of the currency?—The way, speaking generally, in which an increase in the quantity of currency operates upon prices is by enabling people to increase their demand; they offer more of the currency, having more currency, against the commodities; that is the form it takes, the way in which it works.

4008. (*Sir T. Farrer.*) Is it not the fact that advanced countries use less cash and less bullion in proportion to their transactions than less advanced countries do?—I suppose so.

4009. And that a country at a more advanced period of its commercial dealings will use much less cash in proportion to the volume of its dealings?—Yes, in proportion.

4010. Then, on the one hand, if cash is used for the purpose of commercial dealings, and causes a demand for gold, there is, on the other, some counteracting agency which makes a country require less cash as it advances?—The increase of credit.

4011. The increase of what we ordinarily call credit; there is some such agency as that?—Yes.

4012. (*Chairman.*) Do we know what the relative strength of those two agencies is, or how far they counteract one another?—No, I think not.

4013. As to that increase of credit, may it not be regarded as an increase of the arrangements for setting off one transaction against another, rather than an increase of credit?—Yes, I should think so. If I used the term "credit," I did so as including everything that improves the general organization of industry, indeed, anything that facilitates exchange of any kind.

4014. One object of a currency may be the determining the relative values of articles, may it not? When you say that so many quarters of wheat are worth so many pounds, and so many bags of cotton are worth so many pounds, that determines the relation which the cotton and the wheat bear to one another?—Yes.

4015. And if you have a variety of transactions in a variety of articles, the result may be that you may settle all those transactions without any money passing?—Yes, certainly.

4016. And the more you increase that system both within any country, and internationally, the less would you require currency in the transactions of the world?—Certainly.

4017. And would not that diminish the effect which changes in the volume of the currency produce upon prices?—So far, it would counteract any contraction that might occur undoubtedly, but you would still need reserves and till money in the banks, and a drain upon the banks would affect prices.

4018. (*Sir T. Farrer.*) The word "credit" rather implies a belief on the part of someone that somebody else will be able to pay at a future time, does it not?—Yes, I think that is a good definition.

4019. Therefore, that hardly includes all those forms of arrangement in which merchants at present do without currency, although they express their agreements in the form of promises to pay. When a merchant sells commodities, and obtains a bill or anything else in return for them, what he gets is really something that is an equivalent to an order for other commodities, is it not?—Yes, I suppose so.

4020. And you hardly would call that credit, at least, not in the sense in which I have used the word just now?—It involves an element of belief in the existence of other commodities which he will get in return for commodities that he parts with?—Yes.

4021. (*Mr. Barbour.*) A belief that he will get coin?—I should think a belief that he would get coin, if necessary, would enter in.

4022. (*Sir T. Farrer.*) It may be a latent belief which in certain extreme events he might have to fall back upon, but in the great bulk of transactions the idea of gold never enters into the merchant's mind at all, does it?—I should think at the time of selling, the buying of the other commodities does not enter into the merchant's mind at all, but the gold in some shape, or the representation of the gold—that is "money."

4023. Do you say that when a manufacturer makes cotton goods and sends them out to India, that he thinks of purchasing raw material or of purchasing silver?—I should think, in the first place, that he thinks of increasing his balance at his banker, or something of that kind—of the money he will get. He thinks of everything in terms of money.

4024. (*Chairman.*) But, supposing he draws upon the person in India to whom he sold his goods, and has given his acceptance to the person from whom he has bought the raw material, both those transactions being carried through by means of his banker, he looks to the one to pay for the other, leaving a balance of profit. He never thinks about getting so much coin for the goods, nor of paying so much coin for the goods; he never will see or hear of either, but the result will be that he will find ultimately, at his bankers, the balance of the one over the other?—The only stimulus to trade is profit, and profit is the balance in that way, but still you have a comparison of two transactions, made both of them on a currency basis, and the difference in the result is the profit or loss.

4025. (*Mr. Courtney.*) As matter of fact, a great manufacturer would conduct his business from one year's end to the other, and the only coin he would get from his banker would be coin to pay wages with?—Yes, I should think so.

4026. All his payments for material would be paid through the bank, and all his receipts would be received in bills through the bank?—Yes.

4027. (*Chairman.*) Do you consider that the evil of the existing state of things is not only that arising from the appreciation of gold, but also the evil arising from the depreciation of silver?—Yes, I think that there is a disturbance of international trade as well as this disturbance of contracts caused through the appreciation of gold.

4028. Then will you state what you regard as the evils of the existing state of things. As regards the depreciation of silver, or, assuming it to exist, the appreciation of gold?—Assuming the appreciation of gold to exist, I should think that the evil there comes in through the fact that contracts are made with the element of time; for instance, in the case of agriculture, farms if not actually taken on lease are taken with the idea of a rent fixed for a long time. Then if there is any great fall in general prices, that, of course, operates very prejudicially on the interests of the farmer by the increase in the burden of his fixed charges, while the prices he gets are smaller.

4029. Supposing, with regard to the fixed charges for mortgage, that money is cheaper, might not that more than counterbalance the loss by appreciation? Supposing a man, for example, to borrow a good many years ago at 5 per cent., and he can now borrow at 3½ per cent., even taking it that gold has appreciated, may he not be better off now if he can pay off his old creditor and borrow at 3½ per cent. than if he was paying 5 per cent. without any appreciation of gold?—That might possibly happen, I should think, in some cases, but in the case of the farmer, I do not see how that would operate. His principal burden is rent.

4030. It is not clear, is it, that if money be much cheaper, even though gold is appreciated, the position of the debtor may not be quite as good as it was?—Of course, the rate of interest depends upon different causes from the value of money in the sense of its exchange value. A man might lose, for instance, on the exchange value of the commodities that he sells;

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he might gain by the fall in the rate of interest on the capital that he borrows.

4031. When you are looking at the total position as compared with the previous time, inasmuch as the appreciation of gold, if it exists, at all events has not affected the price of money, the position of a debtor now may not necessarily be worse?—Not necessarily. That is, that so far the fall in the rate of interest might in some cases balance the fall in the price of commodities, but taking the case of mortgages on land, I should think that there the diminution in rents on the part of the landowner is much greater than any difference he might make of a half per cent. in the interest that he pays on those mortgages by renewing them.

4032. Within the last few years a very considerable amount of money that had been borrowed formerly at 5 per cent. now stands at 4, does it not, on the mortgage of land in this country?—I am not able to speak as to the rates in this country of the mortgages, but I think in Scotland the rate has fallen from about 4 per cent. to 3½ per cent. in recent years; but then I should think that the real rental of land had fallen probably from 25 to 30 per cent.

4033. (*Mr. Courtney.*) Of course, a fall from 4 to 3½ per cent. is a fall of 12½ per cent.?—That would be about one-half the fall on the rental.

4034. (*Chairman.*) I gather from your previous answers that you attribute in part the prejudice to the agricultural interest to the increase in the supply of the commodities in which they deal?—The increase in foreign supply, of course, operating on the prices. It would not matter to them how much came in if they could sell their own produce at a good price.

4035. (*Sir T. Farrer.*) The appreciation of gold is the same thing, is it not, as a fall in prices?—Yes, it seems best to use the word in that sense.

4036. But that may arise from two causes. It may arise from something inherent in the gold, or from something inherent in the commodities?—Yes; it may arise from causes primarily affecting the currency or the commodities.

4037. What you have been stating about the evils of appreciation applies only to the former of these, does it not?—Yes, I should think so, because in general any cheapening of commodities (the level otherwise remaining the same), is beneficial on the whole.

4038. And as regards the position of debtor and creditor, how will that operate? Take the case first of the debtor, the mortgagor in this country; he is in no way recompensed, as he takes less by the increased abundance of foreign corn, or to a very small extent?—Only to a small extent as a consumer.

4039. But that is because he produces the very same thing at a higher cost which is produced at a lower cost elsewhere?—Yes, if that is so.

4040. Therefore it is the foreign competition that injures him?—Yes, in that case.

4041. And not the appreciation of gold?—Yes. It is the fall in the price of a particular article; a relative not a general fall.

4042. Then I want to go on to a further case. I admit that he is injured, but I ask you whether that is by reason of anything in the relation between gold and commodities, or by reason of the commodity which he produces, being produced in greater abundance elsewhere?—By the greater cheapness of the commodity under your hypothesis. That cheapness may be due either to improvements in the communication, for instance, between the West of America and this country, or it may be due to the depreciation of silver and exports from India.

4043. I put aside depreciation of silver as a separate cause. Railways in India, the Suez Canal, transport by sea, breaking up of new land in America or India; from all those causes the English landlord suffers by the increased abundance of the commodity he produces, and that on the whole is a benefit to the world if it is a prejudice to the English landowner?—Yes.

4044. And a benefit to England?—Possibly, on balance.

4045. Well, that has been our theory, has it not?—Yes, but the injury to agriculturists must be considered.

4046. Now I want to take the case of a producer of commodities, who is at the same time a borrower, and has to repay the principal or to pay interest upon it in gold which will buy more commodities than it would have bought at the time the loan was made to him?—Yes.

4047. If he has to pay more for his gold by reason of the increased production of the commodities which he produces, then, although he has to pay more, he has more to pay with, has he not? For example: India has borrowed very largely from this country, and has to pay a fixed interest in gold. India is producing, very much more largely than it did, corn, cotton, and other commodities, which it sends to this country, and is importing into this country very largely, and we will assume for the present that the increased production of these commodities is due to increased facility of communication, and, amongst other things, to the railways which have been built by the money borrowed from England; then, although India has more to pay by way of interest, the gold in which she has to pay interest is of more value than when the loan was made. India is better able to pay than she was?—Yes, precisely; it is quite possible.

4048. And that has to be set against any increase in the burden on India by this gold debt?—I certainly think that that is a most important consideration as regards India.

4049. (*Mr. Barbour.*) And suppose simultaneously with the cheapening of production that there had been an increase in the currency, sufficient to keep prices at their old level, the advantage would have all gone to the producer and not to the mortgagee?—Yes, I should think so. That would have been a still greater advantage for India.

4050. (*Sir T. Farrer.*) Therefore to sum it up, if the appreciation of gold or fall in prices arises from something inherent in gold, it alters the relation of debtor and creditor in a different way from the way in which it alters it if the appreciation of gold and the fall in prices arise from the increased abundance in commodities?—Yes, I think so. But I am not sure that I have seized your point. A fall in the prices of a few commodities cannot be properly called an appreciation of gold.

4051. (*Chairman.*) The next point on which I will ask you to make some observations is whether the evil calls for legislative interference?—I say undoubtedly. There is no natural tendency to equilibrium with reference, not only to the appreciation of gold but also to the depreciation of silver.

4052–3. The volume of gold is year by year added to, is it not; it has been down to the present time, very considerably. Several millions a year applicable to coinage have been added to the store of the world. Why, if that is added year by year, should prices fall, supposing the fall arises from there not being a sufficient volume of gold currency?—Because, in the first place, there is a great increase in the amount of work to be done by the gold, through the increase of trade and population. For instance, compare America now with the America of the beginning of the century. America requires an enormous mass of gold compared with what it did at the beginning of the century, and the same with all our colonies, and a number of other countries.

4054–5. Yes, but you must take America compared with five years ago?—But even taking all the great progressive countries over such a short period as five years, I should think that it is quite possible that their effective demand for gold, if prices had remained at the same level, is not met by the additional supply of four or five millions a year, or whatever it may be.

4056. Now, if you take the annual production of

gold and silver according to Tooke and Newmarch, for example, from 1861 to 1865 it is 20,000,000*l.*; from 1866 to 1870 it is 20,000,000*l.* odd; from 1871 to 1875 it is 20,000,000*l.* odd; therefore, you have there a tolerably constant addition annually of 20,000,000*l.*?—Yes, roughly speaking.

4057. Now if the trade was expanding largely, and the population increasing as it did during those years, why was not there an appreciation of gold then and prices going down instead of going up as they were?—Well, I should say that on the whole there was a tendency towards appreciation.

4058. But that is the time during which the prices were going up, and the great prosperity was prevailing?—The view of Tooke and Newmarch is that the effects of these gold discoveries were neutralised very much more speedily than is generally supposed; and even according to Jevons's calculation, I believe, on index numbers the depreciation was only about 16 per cent. from 1850 to 1865. I remember that Tooke and Newmarch say, that even in 1857 there was really no great rise in commodities generally, although it is supposed that there was. So I should say that there was even then, in spite of this enormous increase in the production of gold, a tendency, owing to the great increase in population and trade, towards appreciation.

4059. You mean that this steady addition of so many millions a year, would not be enough to keep pace with the increase of trade?—That is my opinion. It is not enough to consider the supply, we must also look to the demand all the world over. There is one other element which I think ought to be taken into account, which is also emphasized very much by Tooke, and that is, the wear and tear of the coinage described in Vol. VI., p. 412. Now the greater the volume of your coinage, so much greater is the absolute loss by wear and tear; so that if your coinage becomes doubled you get double the absolute wear and tear that you got before, and you would require double the supply merely to keep up the volume of coinage.

4060. But if you had a country starting a gold coinage for the first time, like Germany, when their coinage was all new, for some years you would not need much for wear and tear, would you?—Not in that case; but that is an element that has to be taken into account, in considering the future.

4061. I see that according to Sir Hector Hay, whereas from 1861 to 1870 the gold production amounted to 22,000,000*l.*, as nearly as possible, from 1871 to 1875 it went down to 19,000,000*l.*, a slight diminution, but that would cover part of this period of high prices, would it not?—Yes. My own view would be, that there has been a constant tendency to appreciation the whole of this century; that there was a very great depreciation between 1821 and 1841, which is shown by any method of calculation that has been admitted. I think that is generally recognised. This appreciation was continued until the gold discoveries took effect; then these gold discoveries momentarily gave a rise in prices, a depreciation, but this was neutralised much sooner than is generally supposed, and afterwards the appreciation set in again Well, then there was that great expansion which took place in 1873–74, due to credit causes which disguised the effects of this appreciation, and then as soon as that inflation was over, this appreciation set in again in full force, and it was intensified through the demonetization of silver.

4062. Have you any remedies which you would desire to suggest for the evils to which you have called attention?—The remedy that I propose is conventional bi-metallism, that is, an international agreement between several of the important commercial nations to coin both metals at a fixed ratio.

4063. And you think such a convention would be possible. Would it last, if such a convention were arrived at?—In my opinion, there would be no doubt that the ratio would remain stable under any conditions which are likely to occur, provided the agreement was made between the principal commercial nations.

4064. You propose that silver should become a legal tender, and be minted at a fixed ratio to gold?—Yes. I think it would be essential that the silver should be minted freely.

4065. What ratio would you propose?—Well, I should propose the ratio of 15½ to 1; but I do not think that it would matter very much what ratio was chosen, provided it were somewhere between 15½ to 1 and 20 to 1. It would not matter as regards the fixity of ratio. Of course, the effects would be different as regards prices and as regards various interests.

4066. You propose 15½ because that is the ratio that did exist in the case of the Latin Union?—That is the ratio at which a large quantity of money is still legal tender to any amount in several countries, and that is the ratio which was kept up practically for several years during this century in spite of the great changes that took place in the production of gold and silver.

4067. It would be a great advantage to the holders of silver at the time, would it not, if you changed its relation from 20 to 1 to 15½ to 1?—Yes, I suppose it would be an advantage to holders of silver if the change took place at all suddenly; but supposing the change did not take place suddenly, and they were to hold back their silver for a long time, losing any interest that it might have gained, it is possible that they would not gain very much.

4068. (*Mr. Courtney.*) How could you prevent the change taking place suddenly when made?—Well, I should imagine that what would happen would be this: as soon as the question began to be considered as practical, and as soon as this country entered into negotiations with other countries, immediately there would be some rise in the price of silver, and as the convention seemed to be more and more possible, and as the results seemed to be more and more favourable to the adoption of this ratio then the price would gradually rise until it approached this ratio, just as in the case of the Government offering to buy up a gas company or a water company or anything of that kind; the shares would gradually rise in price as the rumours gained credence that such was to be the fact.

4069. It would discount the rise?—Yes, and that is one reason why I think the ratio of 15½ to 1 is one which people should look to as the ratio which would be established, because it would be expected that would be the ratio, and that would tend to force up the price to that ratio.

4070. (*Chairman.*) So that you think that it would not result in any rush of persons to get their silver minted, because before the time arrived for their being able to get it minted, silver would go up very nearly to the price?—That is what I imagine would happen.

4071. (*Mr. Birch.*) Do you think that that would be convenient for India, the ratio of 15½ to 1?—Well, I suppose that if a change were made suddenly, so that the change operated to-morrow, that it would dislocate trade altogether for the time being, but then, I should imagine that the rise would be gradual. Any change from the present ratio, the actual market ratio, to any higher ratio, if it were made very suddenly, I should think would dislocate a good many trade operations.

4072. (*Chairman.*) When you had fixed that ratio, you would expect, I understand, only limited fluctuations after that in the comparative value of silver and gold?—After this ratio was fixed, I should not expect any fluctuations in the value. I should suppose that the ratio would really remain stable. You might get in particular places, and, perhaps, at particular times various local and temporary fluctuations. You might get special demands for one metal or the other which would lead possibly to an agio being paid upon one of the metals, but that really would not be a disturbance of the fixed ratio between them, taking the world all

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over. It is possible that the agio at one place might be neutralized by a different agio at another.

4073. You have stated that the remedy that you would propose would be bi-metallism of that character and that you think that practical. Would you be good enough to state to the Commission what benefits you think would be derived from the introduction of such a system?—In the first place this appreciation of gold would be neutralised to some extent through the greater abundance of the standard money; that is, instead of relying merely upon the supply of gold, you have also the supply of silver to rely upon.

4074. You would add to your currency only so much of the production of the silver of the world as is not now used for coinage purposes, would you not?—Yes, some would still be used for the arts and some would be exported to the east; but as far as the western countries are concerned, a certain amount, at any rate, of the silver newly produced would become standard money, and it would so far act really in the same way, it seems to me, as if gold discoveries were made.

4075. Do you think that this fixed relation between the rupee and the sovereign would tend more to the use and hoarding of gold in India than exists at present?—I am not able to say on what the hoarding of gold in India depends. I have seen it stated that the dearer gold becomes, the more likely people are to hoard it. But I have also seen it stated that the rise in the price of gold makes it more difficult for them to get the gold. I am not in a position to give an opinion as to which operates most. I should think both of them are valid causes.

4076. The gold hoarded in India would not be so much added to the currency, although that is what you would desire to see?—No; I may say I look upon the effects of great discoveries of the precious metals as having been proved to be exceedingly beneficial, and I think that it would have been a great misfortune for the world at large if on the discoveries of silver in the 16th century silver could not have been used as standard currency. In the same way with the gold discoveries about 1850, if the world had taken to using silver as the standard, and not availed itself of gold as currency, I think that there would have been much less expansion of trade than took place; so that I think any discoveries of either of the precious metals, under this system, would act beneficially by increasing the quantity of money and stimulating trade. But I do not think there would be any very great disturbance of prices. I think, as Tooke and Newmarch have shown, the general effect of these discoveries, if you allow the metals to be freely minted, is a great expansion of trade and commerce, and no very great inflation of prices; that you get a tendency towards a rise in price, and this tendency towards a rise in price stimulates trade. Under the present system you get, in the first place, depreciation of silver, and then you get as a consequence a depression of trade.

4077. But why should the depression of trade follow the depreciation of silver?—It follows from the fact of all those exports from silver using countries being sold at a lower price. Take, for instance, wheat.

4078. If they sell a great deal more of it, and at some profit, though a smaller one, that may be a very good trade, and as good a trade as the other?—For the silver-using country, probably; the effect at first would be a stimulus to the trade of the silver-using country; that I should allow.

4079. (*Sir T. Farrer.*) You mean, the appreciation of gold produces depression in the gold-using countries? I wish to consider the case of the effects of silver discoveries under bi-metallism as proposed and under existing circumstances?—Under bi-metallism as proposed a great increase in the quantity of silver would act precisely—so long as the ratio was fixed—as the gold would act. You would get all the beneficial effects coming from the great gold discoveries in 1850, and in the 16th century from the silver discoveries. But under the present system, if you get great discoveries of silver, the first effect is a depreciation of the silver; then, as a consequence of this depreciation of the silver, you get all the exports from silver-using countries sold at a lower price. Then that fall in price is reflected to other commodities. For instance, if you get a fall in the price of some great agricultural staple like wheat; well, that immediately induces all the farmers to take to agricultural stock, or roots, or something; that increases the supply of these things beyond the demand for them: so you get the fall in wheat leading to a fall in all agricultural produce.

4080. That is a temporary effect, is it not?—Only temporary; but I mean temporary as opposed to permanent. Temporary may be a long time for practical purposes.

4081. It will only last till silver has gone to the silver-using countries to raise prices again?—Well, I think the ultimate effect would be that some time or other this artificial stimulus to exports from the East, and the corresponding check on imports will cease, and that then the depression which had been felt in western countries would go to the eastern countries. That is what I believe may be the case if this is allowed to go on; that in the end India, which at present gets an artificial stimulus in some ways, will, when silver is sent there and prices move there, feel a corresponding depression to what is now felt here. But it is extremely difficult to forecast the distant future, and I am considering only one cause.

4082. Have you proved that it has felt the stimulus hitherto?—I understand that there are certain kinds of cotton exports from this country to India, certain kinds of cotton goods which are produced now only in India which were formerly exported there, and as regards exports from India, I believe there has been a very great increase in the export of wheat from that country.

4083. Are you aware that taking the whole exports of the two countries together, the increase of exports from England into India has been greater than that of the exports from India to England during this period of the fall in silver?—Yes, I believe there has been a very great increase of the exports into India.

4084. (*Chairman.*) How would you account for that? Would not you expect that the exports from India would be stimulated, and the imports into India checked?—I should expect that the natural effect of the fall in silver would certainly be to check the importation of commodities into India, but that might be neutralized from other causes; for instance, if there is a corresponding fall of prices on this side, and Manchester manufacturers must sell their goods somewhere, they cannot sell them any better on this side than on the other. Although they get a very low price when it is converted into gold in India, still that may be as well or better than they can sell anywhere else.

4085. (*Sir T. Farrer.*) That is the appreciation of gold, is it not?—Yes.

4086. (*Mr. Barbour.*) The gold price of articles imported into India has fallen largely?—Yes, I believe so. The Manchester people really cannot stop their works. As long as they go on producing, if they cannot sell at a profit on this side then they lower their price and sell in India.

4087. (*Chairman.*) But the price of cotton goods you would expect to go down, would you not, considerably, if the price of cotton went down, and the profit of the manufacturer might remain the same though the value of the goods exported might largely decrease?—No doubt, and one reason the Manchester people have been able to export to India is that there has been a fall in the price of raw cotton, and they have been able to some extent to throw the loss upon the producer of the raw material, but at the present moment I understand there is a tendency to rise in the raw material, and with the fall in the exchange with India the trade is practically stopped, because they cannot do business unless they get cheap material or a rise in exchange.

4088. (*Sir T. Farrer.*) When did that happen?—

I heard from Manchester only yesterday, that just recently there is a tendency for the raw material to rise, and it was stated that in four or five weeks there had been a very great check on the export trade to India on that account. Profits are already at a minimum, and if the raw material rises, or silver falls further, or both, I should think wages must be lowered, or exports must be seriously checked.

4089. (*Mr. Birch.*) Then the rise in the price of silver would have an exactly contrary effect in India to what it would have here; our manufacturers would prosper but the Indian manufacturers would be prejudiced?—Yes, I suppose that would be the immediate effect.

4090. (*Chairman.*) That would be brought about by the conventional arrangement which you suggest?—The momentary effect no doubt of this conventional arrangement would be prejudicial, I should imagine, to those newly started cotton manufactories in India.

4091. (*Mr. Barbour.*) But if the ratio fixed was the market ratio of the day, Indian industries would escape that, would they not?—Yes, I suppose they would, and, so far as they had any natural advantages, they would not be injured permanently. It would operate like the abolition of a protective duty.

4092. (*Chairman.*) I understand your reason for suggesting the ratio of $15\frac{1}{2}$ to 1; but would there be any impossibility or practical objection to adopting, say, the existing ratio at the time of the change?—I think there would be a difficulty as regards the large quantities of silver held by those other countries who would join the convention at the old rate of $15\frac{1}{2}$ to 1.

4093. (*Mr. Fremantle.*) Then the whole of the United States standard silver currency would have to be recoined if the ratio of $15\frac{1}{2}$ to 1 were adopted?—I believe the ratio there is 16 to 1.

4094. And the adoption of the ratio of $15\frac{1}{2}$ to 1 would involve great re-coinage in this country, would it not?—I think in this country it would be one way out of the difficulty with the half-sovereign.

4095. Do you anticipate that all the present token coinage in this country would be required if there were standard silver coins?—Yes, I should think that it would not make much difference to the token coinage.

4096. You would propose to have the present token coinage, and, in addition, large pieces of standard coin silver?—Yes. I am not able to form an opinion as to the best form the standard silver should take, but I should think it would be best on the analogy of the other nations to make it a double florin, or something of that kind.

4097. (*Chairman.*) Then you think that if the present system continues, that the time will arrive when gold prices will cease to fall, and silver prices begin to rise in the East, and then the stimulus will be exactly the opposite to that which you say exists at present, the stimulus will be to imports into India, and a check on exports from India?—Yes, that is what I should expect. Eventually the depreciated silver will be sent to the East, and raise prices there, and the process of depreciation of silver must stop some time or other.

4098. So that what you suggest is, that though the bi-metallic system would make a change, which at the present moment would be prejudicial to India and beneficial to England, it would prevent a time when the state of things would be reversed?—Yes, and I may put it on more general grounds, that I think that any change in trade that is due merely to a currency disturbance should be neutralized, if possible; that all currency disturbances are evil in themselves; that the great thing we want to get, if we can get it, is stability in the standard as regards the general level of prices; and as regards the countries using different metals, I think that it is very important that we should get stability of ratio.

4099. (*Sir T. Farrer.*) You do not think that the change that you propose would probably make any very great difference in existing prices?—It would of course be very difficult to say, what would be the immediate effect, because prices depend so much upon credit influences as well, and all kinds of things, but I do not see any reason, as regards the supply and the demand for the metallic currency. I do not see why there should be any great change in the level of prices.

4100. Your object would not be to produce any great alteration in prices, but to produce stability for the future?—Yes, that would be the principal object.

4101. (*Mr. Birch.*) But can you imagine any greater disturbance of our currency than what you propose now?—It never occurred to me as being a great disturbance to the currency of this country.

4102. (*Sir T. Farrer.*) Well, is it not a fact that the transactions of the world are now to a very large extent settled in London, and that they are settled in London upon the basis of the pound sterling?—I am not able to say. I thought, founding upon, I think, something in Goschen's "Foreign Exchanges," that fewer transactions were settled now in London than was the case some years ago; for instance, I thought that formerly, the American trade with the East was largely settled through London, but now it is settled directly with the East; but I am not able to speak of my own knowledge.

4103. At any rate, London is a very great financial centre?—Yes, London is a very great financial centre.

4104. And the pound sterling of the London market is known throughout the world?—Yes.

4105. Then is it not a very considerable change to alter that language, supposing it to be merely the language, the language which the commercial world understands?—They would be able, anybody who wanted gold would be able, to get the gold all the same. I do not for a moment suppose that this country would be deprived of its gold.

4106. They would be able to get the gold, but a pound sterling would mean something different to what it does at present. It would mean either so much gold, or a certain quantity of silver?—Yes, there would be a change in the meaning somewhat.

4107. (*Mr. Barbour.*) Did the pound sterling at one time mean a pound of silver?—The first meaning of the word sterling was in connexion with the silver penny, and the common name of the silver penny was sterling. The pound sterling was a real pound of silver.

4108. (*Mr. Fremantle.*) But the pound sterling all over the world is the sovereign?—The pound sterling at the present time is the sovereign.

4109. Have you ever known in the political or commercial history of the world, any such arrangement as the proposed bi-metallic arrangement?—Well, I think that, perhaps, an analogy might be found in the history of this country, because in early times you find different parts of the country having mints for themselves, and different coins, and certainly you get England and Scotland, for instance, with different coinages, then you find a gradual uniformity introduced. In every nation, with the advance of civilisation, the necessity of uniformity of coinage has been felt.

4110. But what I meant was, whether any agreement of this sort was ever made before?—I suppose the agreement of the Latin Union was to some extent of that nature, but not altogether.

4111. (*Sir T. Farrer.*) I should like to ask you one question further about the effect of the appreciation of gold upon the Eastern trade. You have told us what would be the effect of the depreciation of silver, that is to say, that there would be a flow of silver to the East, and exports from the East would be stimulated. That is, on the hypothesis of a depreciation of silver. But supposing that what has happened now, the divergence between gold and silver, has arisen from appreciation of gold, and not from depreciation of silver, what would be the effect on the trade?—Western prices fall, and, if silver falls in the same proportion, there is no change in the trade, but if silver falls to a less degree——

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4112. But I am taking that hypothesis, that the fall in prices is in gold, then you do not think that in that case, there is any stimulus to the trade from the east?—Not if gold prices fall in exactly the same proportion as silver, but it is very difficult to speak of the Western prices falling in a certain proportion. It is very difficult to get any average of the fall, and of course what is true of the average will not be true of each particular commodity taken.

4113. That is always the difficulty, but I am now taking the hypothesis that the fall that has taken place is in the gold, that is to say, that the gold has become scarce, and that consequently prices have fallen. You do not think that that would have any effect in stimulating the trade from the East?—Certainly not A fall in prices on this side, unless silver had fallen even more, could not stimulate exports from the East.

4114. And it does seem probable, if the result is due to something inherent either in gold or in silver, that the change is due to something that has happened to gold, rather than to something that has happened to silver. This seems probable from the facts that prices in India have been tolerably steady, that prices in this country have fallen, and that there has not been any abnormal flow of silver to India?—I do not quite follow the question.

4115. The question is, what is the cause of the divergence between gold and silver?—Yes.

4116. That may be due to something that happens to gold or something that happens to silver?—Yes, or both.

4117. On the hypothesis that it is something which happens to silver, that silver becomes more abundant, silver would flow from the East, silver prices would eventually rise, and exports to the East would be stimulated for a time?—Yes, that is if silver flows to the East, and silver prices rise, and silver is not proportionately depreciated.

4118. But on the hypothesis that it is something which happens to gold, then there would be no such stimulus?—Not if it affects silver in the same proportion. But if silver prices remained steady, and gold prices fell, and silver did not fall proportionately, there would be a stimulus. The way the stimulus operates, depends upon the level of silver prices, compared with the level of gold prices, and the ratio of gold to silver. You must consider these three elements.

4119. (*Chairman.*) Under the fixed ratio, your anticipations would be that any discovery of silver would, by adding to the volume of the currency, improve trade?—Yes.

4120. Whereas at present you say that a discovery of silver, by depreciating silver, disturbs trade?—Yes, it dislocates the trade between gold and silver countries at any rate; it makes a great disturbance in the contracts that are made between those countries.

4121. If all countries were gold-using countries, the end to be effected by bi-metallism would not be nearly so important, I gather?—No. If they were all gold-using, so far that would neutralize one of the evils, viz., the variation in the relative value of the standards of the different countries.

4122. And I gather from what you have said that in your view that is the more serious evil?—The other evil, the appreciation, so long as it is gradual, as was the case before this monetary disturbance, I think can be met, and is met, except in a very few cases. Most contracts are after all only made for a comparatively short time, so that this secular appreciation really does not affect trade so much; it is the constant oscillation between the standards of different countries that is a constant disturbance. At the same time I think that a sudden appreciation may be productive of very serious evil; and I think that if an attempt were made to establish general gold mono-metallism, the consequent appreciation would be most disastrous.

4123. Now as regards the ethical propriety of making such a change as the introduction of bi-metallism, what have you to say?—First of all, I should say that those who have gained by the fall in silver have gained by accident, so that if their accidental gains are taken away or neutralized, I do not see that there is very great injustice done to them. No one anticipated in 1873, and made bargains according to the expectation of this fall in silver. If they have happened to gain by it in any way, and if they would lose by the rise in silver, the loss they would now sustain would only neutralize the accidental gain that they made before, so far.

4124. But so far as bi-metallism affected prices, it would affect the relation of debtor and creditor in the discharge of obligations, would it not?—Yes, so far as it affected prices, I think it would really do so.

4125. Put aside for a moment the depreciation of silver and the relation of silver to gold; assume gold to have become appreciated by natural causes, you would interfere, by means of a conventional or artificial arrangement, and that interference would affect the relation of the parties, who hitherto had only been affected by natural causes?—It would certainly do so, but the general results, I maintain, would be much greater stability in the standard. At present what we have to expect is a constant appreciation, which is a constant disturbance of the relations of debtor and creditor.

4126. Still your proposal, if carried out, would not only stop that, it would to a certain extent reverse it?—To a certain extent it would reverse it, and neutralize it; so far, I should think, it would be beneficial. For instance, I should say that for the next five-and-twenty years, if this plan were adopted, there would be a less disturbance of the relation of debtors and creditors than if the present appreciation of gold were allowed to go on.

4127. Still, for the moment I understand your expectation to be that prices would rise?—To a certain extent.

4128. And, therefore, that it would not merely stop the change, prevent the change going on, that had been going on, but it would reverse the process and make a change in the opposite direction?—But I should not anticipate any very great rise in prices.

4129. (*Mr. Barbour.*) Up to 1873 there was a fixed ratio between gold and silver at $15\frac{1}{2}$ to 1?—Yes.

4130. And all contracts up to 1873 were made at a time when that fixed ratio prevailed?—Yes.

4131. So that if now we went back to the old ratio, we should simply be going back to the conditions that prevailed when those contracts were made?—Yes, certainly.

4132. And the special disturbance would only be in regard to contracts entered into since 1873?—Yes.

4133. (*Mr. Fremantle.*) That ratio did not prevail in this country, did it?—Of course, this country was not bi-metallic.

4134. (*Mr. Chaplin.*) With regard to arrangements entered into before 1873, I understand that the parties hitherto have not been affected by natural causes only. Were they not affected by the legislation which demonetized silver in Germany and elsewhere?—After 1873, yes.

4135. (*Sir T. Farrer.*) But not by our legislation?—Not by our legislation but from our want of legislation.

4136. (*Mr. Chaplin.*) And if your proposition was adopted you would be simply restoring the old state of things existing before 1873, which was disturbed by subsequent legislation?—Yes, practically.

4137. (*Chairman.*) That is by the legislation of a foreign state?—That is quite true, but then these foreign states offered, as far as I can gather, to enter into an agreement with this country before and this country refused.

4138. (*Mr. Fremantle.*) But it was a system that had been originally established by legislation?—Yes, but then I should maintain that all the coinage of

the world depends upon legislation; it is altogether artificial.

4139. (*Chairman.*) You would, I suppose, confine your view to the currency; you would not say as a general proposition that we had a right to interfere by legislation to change a condition of things in all cases in which people had been affected by the legislation of foreign countries?—Supposing that in any way the real meaning of contracts was disturbed, and supposing by legislation we could bring back the old meaning, the meaning which was the real intention of the parties at the time the contracts were made, then I should approve of it, but I do not suppose generally you could do it. Your legislation would probably disturb other interests. It is only in cases like these, where you get serious evils on the one side and considerable benefit on the other, that it is worth while attempting to get a legislative remedy, but I would certainly theoretically approve of the legislative remedy, though I should doubt practically if it could be carried out in most cases. As an example, I may say that every commercial treaty takes account of foreign legislation.

4140. (*Mr. Chaplin.*) You do not propose anything which would directly interfere with contracts themselves?—No, nothing at all. All that we propose to do, is to deal with certain circumstances by which possibly those contracts might be affected.

4141. (*Chairman.*) But I understand you to propose that a person now entitled to receive so much gold, should be bound to receive so much silver, that was part of your proposition, was it not?—But the bargains that are made, I presume, are for so many pounds, they are not definitely for so much gold, they are for so many pounds sterling.

4142. But as the law stands now, he is entitled to demand one pound sterling in gold?—Supposing a man wanted to get the gold to make a gold watch of, and you gave him so much silver, and told him to make a silver watch, that would be a disturbance of contracts really; but so far as it concerned merely the money, he would have no difficulty in exchanging the silver for the gold, he could get it exchanged at any money-changer's. I cannot see that there would be any injury inflicted.

4143. That would depend on the convention embracing all nations; otherwise, if you give him gold he may use it to bring goods from abroad under a conventional arrangement, which holds good in his own country, but does not hold good elsewhere?—I think it would be necessary to have the principal nations agreeing on this convention, but then there would be no difficulty in anyone getting gold in this country to send abroad if it were required, or in any of the other countries.

4144. (*Sir T. Farrer.*) But he would get less commodities for his gold?—It depends on what the rise in prices was.

4145. You do not think it would effect any great rise in prices?—I cannot say what the momentary effect would be, because it is impossible to anticipate what the effect would be of speculation.

4146. You do not think with Mr. Manning in his message to Congress, that it would raise the price of wheat 25 per cent. in this country?—It is difficult to say about the price of wheat, because of the Indian supply; but as regards general prices, I cannot think that there would be a rise in general prices on this account of 25 per cent., that is, apart from speculative influences.

4147. Indian wheat is the very wheat which is complained of by Mr. Secretary Manning as having lowered the price of European and American wheat, and he attributes it all to the divergence of gold from silver. You do not think tying gold and silver again would raise the price of English and American wheat by 25 per cent.?—The price of wheat in the London market at any time and also over a term of years depends upon a number of causes affecting the demand and the supply, and I have not sufficient statistical data to say accurately how far this particular cause of the depreciation of silver acts. Perhaps, however, it may be useful to the Commission, as suggesting lines of inquiry, if I state the principles on which, according to the theory generally accepted by English economists, the price of wheat is determined over a term of years sufficiently long to allow the supply to be adjusted to the effective demand. The point is, that wheat, though produced in different places at different costs, sells (allowance being made for quality) at the same price in the same market. But no portion of the supply will be forthcoming over a term of years unless it yields to the producer his expenses and minimum profit. Accordingly, if the price falls, the producer least favourably situated will withdraw his supply, and this withdrawal will last so long as prices remain low. This is the reason why the area under wheat in England has declined. Farmers will not year after year grow wheat at a loss. But so long as cessation of supply from the more expensive areas is met by supplies from the less expensive areas, there will be no rise in price, and if the new supplies exceed the old, the price will continue to fall, and more of the old supplies will be withdrawn. This substitution of new for old supplies will go on until the former are no longer able to meet the effective demand, and then the fall in price will cease, and the contraction of the old wheat area will cease also. Thus the conclusion is arrived at that the normal or stable price of wheat will be such that the part of the supply (necessary to meet the effective demand) which is produced under most unfavourable circumstances will determine the price, and the producers in a better position gain, or are able to pay "economic" rent. Thus the cheapest supply determines how much of the more costly supply will be needed, and this again determines the price, and thus it is only indirectly (through limitation) that the cheapest supply determines the price. Now, to apply these principles to the present case, it is quite clear that India can only supply a small part of the total required in the West. But so long as the additional Indian supply exceeds the deficiency of the West, through the contraction of cultivation, the price of wheat will for the time be too low to be profitable to the least favoured western producer. That seems to be the case at present. Owing to the fall in silver, Indian wheat can be thrown on the market so much more cheaply than it could be otherwise, and until the other supplies are diminished, the price will remain low. Now, it seems to me probable, if the price of silver rose to its old level, wheat could not be profitably exported from India until prices rose in a corresponding degree. For India, being a silver country, the price of wheat there is independent of the relative value of gold and silver. An exporter to England, at present, will give the Indian price in silver, and he can buy his silver for less gold, and thus competition will lower the price. If the price of silver rose, the exporter from India must get more gold. Thus, a rise in silver would, on this view, raise the price of wheat to a corresponding degree. But in this case the same quantity of Indian wheat would be sent as before, and India would not suffer. The rise also would only facilitate and hasten a necessary adjustment. If the contraction in the West, and the expansion in India continues, then eventually silver must be sent to India and prices will rise there. Besides, eventually the price must be such as to be profitable to the great mass of western producers. Suppose, however, that the fall in wheat is really due to causes affecting the nominal or real cost in gold-using countries, and that, owing to a fall in wages, freights, &c., America and other countries can profitably send wheat to Europe at the present price; then although, a rise in the price of silver might check exports from India, the deficiency might be met without any rise in price, or only a momentary rise. In this case the restoration of silver would make a difference to India, but so far not to the West. That, however, is only considering the effects of the recovery from depreciation. So far as the restoration of silver met the apprecia-

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tion of gold, it would raise the price of wheat as it did other things, and if it is mainly in the undeveloped countries that the pressure has been felt, the rise in wheat might be greater. Thus, on the whole, I should expect some rise in the price as the result of the adoption of bi-metallic, and if it is the Indian supply which is the chief cause of the fall, then Mr. Manning's reasoning seems correct.

4148. (*Chairman.*) There is a very large quantity of Chilian wheat imported, is there not? In Chili there is a silver basis, but they have a depreciated currency?—Yes, I believe so.

4149. Well, even if you had your bi-metallic currency, that country would still be left with its depreciated paper currency, would it not?—Yes.

4150. And having that depreciated paper currency, would be likely to export wheat at a cheaper rate?—Yes. That would happen, I presume, if the currency were depreciated as regards gold and silver, and if the wages, and so on, had not risen in the country in proportion to the depreciation, then there would be that stimulus; but it is possible that the depreciation might have affected the wages, and I am not able to say.

4151. Of course, if that stimulus existed, that would tend to keep down, not only the price of Chilian wheat, but the price of all wheat. The extent to which it succeeded in so doing would depend on the relation which its volume bore to the total volume of the imported wheat?—I think the answer I have just given about India would apply essentially to Chili.

4152. (*Sir T. Farrer.*) But any depreciation of that sort would have been only a temporary one. You do not mean to say that any country can, by depreciating its currency, throw all its commodities upon foreign markets?—It would depend upon how long a time it took before the wages and the general elements in the cost of production responded to this depreciation, but I presume, until they did respond, that it would do so.

4153. Yes, it would be during the period during which wholesale prices had risen, and wages had not risen in the same proportion?—Yes, precisely, but I suppose that could only be temporary.

4154. (*Chairman.*) Then you have said that you see no ethical objection to the change, because those who have gained by the fall have gained by accident, and that the injury would be temporary and the benefit permanent. What further have you to say?—Then I say, Government has as much right to adopt this system in the public interest as to convert the national debt (if possible), or to repeal existing tariffs (as in the case of the corn laws), or to refuse for the future to enforce contracts discovered to be against the public interest. It is universally acknowledged that every Government has the right of changing its coinage as it finds expedient, and all contracts must be assumed to have been made subject to this risk, just as property is bought and sold, subject to the risk of future taxation. Then again, the real meaning of a pound sterling is its exchange value. No one wants the gold itself (except as a commodity). But the exchange value is subject to constant fluctuation, and the adoption of bi-metallism would on the whole neutralise the effect of recent changes, and prevent future disturbances; that is, it would lead to greater stability of value, and that is really what every one requires in the pound sterling. It is in one sense a certain definite amount of gold, but when you come to look into it, the only reason for its being a certain amount of gold is, that you suppose that it would give you greater stability of value than any other substance.

4155. You are regarding the pound sterling as a measure for commodities?—As a measure of value and as a standard for deferred payments, especially as a standard for deferred payments, as distinct, that is, from a circulating medium.

4156. (*Sir T. Farrer.*) The effect of a depreciation of silver is, I think you say, to give the Indian producer an advantage, because the prices rise, and he only pays the same wages to his servants; wages do not rise as fast as prices rise?—The Indian producer, if he can obtain through the depreciation of silver, more silver, and if at the same time the wages he pays in silver remain the same, will so far gain.

4157. In the same way the English producer, whether of wheat or of cotton, suffers in the case of the appreciation of gold, because prices fall more quickly than wages do?—Yes, that might happen.

4158. Consequently in the case of the appreciation of gold the sufferer has been the producer, the capitalist, the employer until wages fell?—Yes.

4159. There is an intermediate time during which the workman or the labourer has the advantage of the old wages, and in which he has also the advantage of the cheap commodities?—Yes, that is a general principle, admissible under certain conditions.

4160. And the producer, therefore, suffers by his prices and his profits falling, while his expenses and wages do not decrease?—Yes.

4161. Then the immediate result of an alteration by which you raise the prices again would be to raise the prices to the producer, without raising the wages of the labourer for some time?—Yes, but I should say that when I stated that that was a general principle I should only admit it with certain very important qualifications. It is one element that has to be considered.

4162. I am only speaking of it in the broadest way, but that is the way in which the English producer is placed at a disadvantage as compared with the Indian producer, is it not?—Yes, it is through that, no doubt.

4163. Very well, then, if you reverse the process, you raise the prices before you raise wages?—Just so.

4164. And supposing the commodities which the labourer purchases before his wages rise are affected, he suffers?—Yes, so far.

4165. The capitalist suffers by the appreciation of gold; by the depreciation of gold the labourer suffers?—Yes, that is so far as the general principle goes. You understand, I only admit that with very great qualifications. In the first place, there is the constant tendency on the part of the capitalist who has lost his profit to reduce wages. He tries to reduce wages, and as a consequence there is greater irregularity of employment than would otherwise be the case. There is not anything like the amount of enterprize, embarking in new undertakings, and so on, so that on the whole I think it is very possible, although wages are quoted on the same level, that, taking the real income of the labouring classes, they have not gained. Then another qualification, which I think of the very greatest importance, is that we assume that retail prices follow wholesale prices, but I should think, as matter of fact, the middleman takes good care that they do not follow wholesale prices. That is certainly the case as regards the middle classes, I know from my own experience, and with the working classes I should think with the exception of one or two articles it is probably still more the case.

4166. Has not there been an immense improvement in that respect so far as the working classes are concerned in many districts in England since the establishment of co-operative stores?—I have no doubt that must have operated; but then that seems to me to point also to the fact that the middleman must have been doing extremely good business to give such encouragement to these co-operative stores.

4167. (*Mr. Chaplin.*) In reference to the question that Sir T. Farrer put to you about wages, and also to your statement of the evils which the present system has inflicted on agriculture, is it within your knowledge that the wages of labour, especially in the agricultural districts, have already fallen enormously, in some instances as much as one-third?—I was not aware, as regards agriculture, that wages had already fallen so much. I was rather under the impression that they had not fallen so much as one would have expected.

4168. (*Sir T. Farrer.*) To whatever extent wages have fallen in proportion to wholesale prices, to that extent the producer is not injured by the appreciation of gold?—Supposing wages have fallen in equal proportion, then so far he would not be injured.

4169. May I not sum up your opinion on the whole in this way: that in the case of an appreciation of gold the labourer benefits, to a certain extent, by retaining his wages at the old rate after prices have fallen, and the manufacturer suffers to the same extent because his profits are reduced, but that that is neutralised very much by the fact that this fall in profits prevents the manufacturer from carrying on as much business as he otherwise would have done?—Yes.

4170. But, on the other hand, if you reverse the process, the labourer suffers in a converse way and the manufacturer gains, but that that gain is neutralised because the high prices induce the manufacturer to go on with greater spirit and do more work; is that a fair representation?—Yes, I think so, taking the cause which you have isolated.

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The witness withdrew.

Adjourned till Friday.

Eighteenth Day.

Friday, 6th May 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. H. CHAPLIN, M.P.
SIR JOHN LUBBOCK, BART., M.P.
MR. W. H. HOULDSWORTH, M.P.
MR. C. W. FREMANTLE, C.B.
SIR T. H. FARRER, BART.
MR. L. COURTNEY, M.P., and
MR. GEO. H. MURRAY, *Secretary.*

Mr. H. R. GRENFELL was called and examined.

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4171. (*The Chairman.*) You are a director of the Bank of England?—Yes, I am.

4172. And you were Governor in the year of the last Monetary Conference in 1881 in Paris?—Yes, and I conducted so much of the negotiations as took place between the Bank of England and the Government at that time.

4173. I believe you reprinted Lord Liverpool's work on the coins of the realm?—In the previous year 1880, when I was Deputy Governor, Mr. Birch being Governor, we reprinted and republished that book, which was then out of print; and in the course of that work, I was led to the study of the question of the standard of value.

4174. Now with reference to the standard of value in relation to Lord Liverpool's work, what observation have you to make?—Lord Liverpool's work was on the coins of the realm. All works on the coins of the realm would necessarily involve a discussion of the standard. Lord Liverpool wrote before the French Mint prices were settled. The double standard existed in England up to the suspension of cash payments, in the sense that the word "standard" is used in the present controversy, but as the unlimited coinage of silver had ceased before the suspension, it is asserted by many writers that the double standard did not exist in England up to that date. The Act of Parliament of 1797, limiting the coinage of silver, expressly recites and re-enacts the previous statutes giving silver unlimited legal tender by weight at a fixed ratio.

4175. (*Mr. Courtney.*) What do you mean exactly by your statement that Lord Liverpool wrote before the French Mint prices were settled?—The date of the French Mint Law is 1803. It is true that Lord Liverpool published in 1805, but he wrote in 1797. He was ill for a long time, as you find in the preface to the work.

4176. But what do you mean by Mint prices?—"Mint prices" is the expression used by most of the old economical writers and is to be found in the Bullion Report of 1810. It means the price or prices which the mints are bound to give for one, either, or both of the precious metals according to the standard of the place where the mint is.

4177. (*The Chairman.*) You say the double standard existed in England up to the suspension of cash payments in the sense that the word "standard" is used in the present controversy; in what sense are you using "standard" there?—Well, practically, the unlimited legal tender, irrespective of whether it is coin or bullion of either, or of both metals, at a fixed ratio.

4178. Was there a fixed ratio in England at the suspension of cash payments?—Yes, I think you will find it is so. It is advisable to lay down the meaning of the words "standard of value," that is, to define whether the double standard would mean the existence of a circulation of the two metals in coin at the same moment or the legal tender of either metal at a fixed ratio whatever the circulation. Those in favour of the double standard assert that it existed in the latter sense in England up to 1797, and in France from 1803 to 1873. I understand Mr. Giffen to dispute both of these facts; in the case of France, on the ground that the two metals did not circulate side by side until after the gold discoveries say in 1850.

4179. (*Mr. Birch.*) I have never understood Mr. Giffen to deny that a 20-franc piece in gold would buy in France exactly the same as four silver pieces of 5 francs each; that they circulated side by side; but what happened was this, that at certain periods there was a great scarcity of gold, and at other periods there was a great scarcity of silver, and that at times the one commanded an agio upon the other; he never said that they did not circulate perfectly in France,

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and were not equally recognised there as a standard in purchasing power?—If I understand your question correctly you make Mr. Giffen say that gold and silver circulated side by side, and that at certain periods there was a great scarcity of gold, and at certain other periods a great scarcity of silver, that is, that they did not circulate side by side. Mr. Giffen could hardly have made such an assertion. At any rate if he did I was quoting from something else that he said.

4180. (*Mr. Courtney.*) Is not that simply a question of historical fact?—His statement is that before 1847 France was a silver-using country, and there was no introduction of gold there displacing silver or of silver displacing gold, so that it could not operate as a parachute. He says it could not, he does not say it did not. As matter of fact, the price would show that for some reason or other the agio scarcely altered.

4181. In point of fact, there is no difference of opinion as to its having been a silver-using country?—The difference of opinion is that Mr. Giffen states that the double standard could not have served as a parachute to prevent a fall of silver, whereas in 1850 it did so serve to diminish the fall of gold. My point is that in the one case he states an historical fact, and in the other he only states a hypothetical one, or rather as matter of opinion that it could not have done, but here the list of the relative prices of gold and silver shows that although there was a slight variation, as a matter of fact during the whole 70 years they scarcely changed.

4181*a*. His argument, as I understand it, would be this, the law of France operated as a parachute after the gold discoveries in California and Australia, because it permitted the substitution of gold for silver in the currency of France?—Yes.

4182. It did not operate, though it might under certain circumstances have operated, in the same way, because the circulation was exclusively silver, and there was no substitution of gold for silver, or of silver for gold; it remained continuously a circulation of one metal only?—In one case it is a statement of historical fact and in the other it is Mr. Giffen's opinion that it could not have done certain things. He does not say it did not; he says it could not.

4183. (*Mr. Barbour.*) Assuming that the coin in actual daily use as currency was silver, is there evidence, conclusive or presumptive, to show that there was no gold in France?—I have every reason to believe that there was gold at all times in France. I am not an authority on that subject. I would rather not be considered to be.

4183*a*. (*Mr. Birch.*) Have you read Baron Rothschild's evidence before the Committee of 1832, with reference to gold in France, in which he says (*Q.* 4835) "gold is merchandise in France"; and, in reply to various questions, dwells upon the importance of gold in time of war, and the premium he had paid on the purchase of gold for different Governments?—No, I have not read it.

4184. (*Mr. Courtney.*) There is no doubt there was gold, but whether it was practically circulating, or a commodity or merchandise, as Baron Rothschild says, of course is a question of fact?—It is admitted that before 1850, there was little gold, and that it generally bore a slight agio. The agio, however, in no way betokened a cessation of the double standard, because those determined to have gold and asking for it must have been creditors, not debtors, and the debtor under the double standard has the right to choose the metal in which he pays.

4185. I would only say those determined to have gold, and asking for it, might have been as determined as they liked, but they could not have got it unless the other side chose?—No, but they could get it if they paid for it. I now go back to the "Standard." Lord Liverpool's doctrine with regard to it was founded on the assertions of Petty, Locke, and Harris, that the chief coin in use, and measure of property, could be only of one metal. Having adopted that principle he had to choose his metal. The chief coin in use in England was gold, he attributed that fact to the affluence and great commercial position of England, whereas the truth was that it was owing to gold having been over-valued in England from 1717 to 1797.

4186. (*The Chairman.*) Is that last your view?—That last is generally acknowledged now. It was the first Lord Ashburton's view too. It is not my view alone. I do not think anybody disputes it now.

4187. (*Sir T. Farrer.*) The question arises, does it not, how it first came to be over-valued?—I date from Sir Isaac Newton's time; that is an historical fact.

4188. But previous to Sir Isaac Newton, Lord Liverpool says it distinctly became over-valued by the action of the people, and not by the action of the Government?—I do not know what "the action of the people" means. To return to Lord Liverpool, with the views above cited he naturally chose gold. There is not a word in his treatise showing the equilibratory action of the double standard which was perceived by Sismondi in 1819, and which is described by many of the leading economists, both monometallic and bimetallic, of the present day. I do not think there is a word about it in the reasons for the original Act in 1803. The first place I found it in is in Sismondi.

4189. One question with regard to the law of 1803. I think the proposer of that law always contemplated future changes in the ratio according to the market value of the two metals?—It is possible. Lord Liverpool's idea of a "standard" was almost synonymous with "chief coin in use." The Bullion Committee of 1810 seems to have adopted that idea, as did Sir Robert Peel, when he brought in his Gold Standard Bill in 1816, and appealed to Parliament to return to the "ancient standard of the realm," which was only done in the sense of returning to the standard as shown by the "chief coin in use," namely, gold.

4190. (*Sir John Lubbock.*) You say that before 1850 in France those determined to have gold and asking for it must have been creditors and not debtors. I do not quite follow your argument there?—I should have said, perhaps, those who have a right to have money and were determined to have it in gold.

4191. Creditors had no right as such to have gold?—No, they had not; those who had a right to have money of some kind, and wished to have gold, could get it if they chose to pay for it.

4192. They could not get it because they were creditors, since the debtor had a right to pay them in silver if he chose?—Yes.

4193. No doubt they could get gold by paying for it, but it was not because they were creditors. That gave them no right to gold?—No, quite so. Those who had a right to have money and wished to have gold must have been creditors, not debtors.

4194. A debtor, it is true, would have no right to receive one or the other, but a creditor of course would prefer to have the more valuable metal, but he would have no right to obtain it?—I can only repeat that the creditor who had some money to be paid to him, and was determined to have gold, of course under a double standard law could not have any right to it, and therefore he would have to pay an agio.

4195. (*Mr. Fremantle.*) It is only the same thing as saying that he might get the commodity in the market by paying for it?—Yes, quite so.

4196. (*Sir T. Farrer.*) And he would have to pay for it?—He would have to pay for it.

4197. Is not your meaning that Lord Liverpool and Sir Robert Peel had not in view when they settled our present law, the double ratio, bimetallism in its present sense?—What they had in view was the regulation of the coinage founded upon what they believed to have been the Standard "de facto," omitting all reference to what was the Standard "de jure."

4198. And that therefore their authority is not to be quoted as against what is now proposed by modern bimetallists?—Yes, but I do not pledge myself to the assertion that Sir Robert Peel never discussed it, because in 1844 he distinctly mentioned the bimetallic

system as being in accordance with the metallic standard. I must guard myself from saying that he never considered it at all, because he did, but not, I think, as far back as 1819.

4199. (*The Chairman.*) Will you now proceed to your next point?—The next point is an extract from Mr. Fremantle's report dated 2nd December, 1881, on the Monetary Conference of that year at Paris :—"It has been the policy of this country to emancipate "commercial transactions as far as possible from "legal control, and to impose no unnecessary restric- "tions upon the interchange of commodities. To fix "the relative value of gold and silver by law would "be to enter into a course directly at variance with "this principle, and would be regarded as an arbitrary "interference with a natural law." The words contained in the above paragraph are deliberately adopted by Her Majesty's Treasury, in their letter to the India Office, dated 31st of May 1886. The paragraph seems to me to contain two propositions :—I. That the fixing the value of silver told in gold, and *vice versâ*, is contrary to the doctrines of free trade. II. That it is against nature. I venture to submit that it has nothing to do with free trade or protection. Very little silver is produced in England : no powerful interest in England would gain, in the sense of protection to silver, by the change. In America, where alone the silver mining interest is of positive importance, it is of no consequence relatively to that of other producing interests. If it be said that the object is so far similar to that of protection in that it would raise prices, I can only point out that it could only raise prices on the hypothesis that they have fallen in consequence of a resort to the general gold standard by the greater nations in the world. If prices (as I understand is now contended) have not fallen from that cause, then it is to be presumed by parity of reasoning that they would not rise. The effect of these changes of standard on the general range of prices, cannot be to raise and depress them, and not to raise and depress them.

4200. I understand your point there to be that if it could be proved that prices are not generally affected by the present state of things, that is, depressed by the appreciation of gold, the result of the adoption of the double standard would not be to raise prices ?—Yes, that if they reduce in the one case they would raise in the other.

4201. (*Mr. Chaplin.*) Do I understand that in your opinion the effect of the adoption of bimetallism would be not to raise prices at all ?—No ; all I say is if the changes in the standard in the one direction have not depressed prices, that the changes in the contrary direction would not raise them.

4202. (*The Chairman.*) On the point whether it has depressed prices you have made no assertion ?—I have elsewhere, but at this point I make no such assertion.

4203. (*Mr. Courtney.*) What is the meaning of your statement that "In America, where alone the "silver mining interest is of positive importance, it "is of no consequence relatively to that of other "producing interests" ?—The mining interest is of no consequence in proportion to that of other producing interests.

4204. You mean it is relatively insignificant ?—Yes.

4205. (*Sir T. Farrer.*) You mean that it has no power ?—I should not be stating the truth in saying that it has no power whatever, but I maintain that the power of the general producing interest is infinitely greater, and that the parties who are mostly interested in these propositions for change are the general agricultural and producing interests.

4206. (*Mr. Courtney.*) You attribute the action taken by the Legislature in the United States, not to the importance of the silver producing interests, and the political power exercised by them, but to some wider causes ?—I have had a great deal of evidence tending to justify my assertion.

4207. But do you consider that the action taken by the United States Congress was or was not due to the political influence of the silver-mining interest ?—Yes, I could safely say that I believe it was due to the agitation in favour of what was called "the dollar of our fathers," throughout the country among all the producers.

4208. Producers of silver ?—No, producers of corn, and cattle, and everything, all the producers.

4209. (*Sir T. Farrer.*) The west and south against the east ?—Yes.

4210. (*Mr. Fremantle.*) Was that so, do you think, at the time that the Bland Bill was passed ?—No question about it.

4211. You do not think that is simply a development of later years ?—No.

4212. But surely in the discussions on the Bland Bill the senators and representatives who took the most prominent part were those who represented silver-producing States ?—I have been given the names of some of the principal supporters of what was called the Bland Bill. Messrs. Hill and Jones represented Colorado and Nevada, the only states then producing silver. Mr. Alison came from Iowa, an agricultural state. Mr. Warner from Ohio, which produces a little coal. Mr. Bland from Missouri, where there is little silver, and Mr. Regan from Texas, which is agricultural.

4213. You stated, in calling attention to the extract from the report on the Monetary Conference at Paris in 1881, that the statement made inferred, that to fix the value of gold in relation to silver, and *vice versâ*, is contrary to the doctrines of free trade ; but the doctrines of free trade are not specifically mentioned, are they, in the report ?—No.

4214. And the only statement made in the report is that to fix a relative value would be to enter upon a course at variance with the principle which had guided this country of late years, by fixing arbitrary values upon commodities. That is the contention. These are the words. "It has been the policy of "this country to emancipate commercial transactions "as far as possible from legal control, and to impose "no unnecessary restrictions upon the interchange of "commodities"?—I understand that that means free trade. If it does not, of course the whole argument falls to the ground.

4215. Free trade is a very wide expression, and may signify a great many things. The Report says, and that I think you will allow, that it is contrary to the policy of late years to impose unnecessary restrictions upon the interchange of commodities. That is all ?—I understand that to be free trade.

4216. I hardly know what "free trade" means in that sense ?—I thought free trade meant that there would be no protective duties levied. If you meant something else, namely, the doctrine of "laisser faire," you may have been quite right in saying that it had been, up to 1881, when that paragraph was written, "the policy of the country ;" but I am not now talking of your report, I am speaking of the Treasury letter which adopted your words. It is impossible that in 1886 the Treasury could have meant that "laisser faire" was then the policy of the country.

4217. (*Sir T. Farrer.*) Does it not mean the avoiding of fixing values by law ?—But nobody ever did fix values by law.

4218. (*Mr. Fremantle.*) Surely the proposal is to fix the relative values of gold and silver by law ?—That would be the effect of the proposal, but that is not what the bimetallic proposal would express.

4219. The actual effect would be, would it not, that the relative values of gold and silver would be fixed by law ?—We assert that it did so, but that is the point in dispute. We assert that the ratio was constant till the law was changed, but that is the point disputed by some.

4220. (*Mr. Chaplin.*) I understand the statement to be this, that the policy of this country up till now has been to impose no unnecessary restrictions upon

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the interchange of commodities, and that to fix the relative value of gold and silver by law would be to enter into a course directly at variance with this principle; but what I want to ask you is this, do I understand you to admit that even supposing this bimetallic principle was adopted, would that in your opinion be an unnecessary restriction upon the interchange of commodities?—The answer to that question seems to me to be that it would be a relief from an unnecessary restriction on the interchange of commodities.

4221. (*Mr. Barbour.*) Under a bimetallic system is a man allowed to sell his silver for as much gold as he can get for it, or his gold for as much silver as he can get?—Certainly.

4222. (*Mr. Fremantle.*) Then you would contend that the selection of gold as a standard of value is in itself an interference with free trade?—It is an interference with free trade in the same way as bimetallism. If one is the other is.

4223. What other course would be possible in a country if it did not fix a standard of value?—Then you get barter.

4224. And therefore it is necessary to fix a standard of value?—Yes.

4225. Does law in the country do more than say that if a bargain is made between two persons for a pound, the debtor is to pay to the creditor gold of a certain weight and fineness?—That is all.

4286. (*The Chairman.*) It does not do more than the Weights and Measures Act does with regard to other things?—Precisely.

4227. (*Mr. Fremantle.*) Therefore that is as little interference as possible with the right of people to make bargains between themselves?—It is a very great interference; I do not know whether it is as little as possible.

4228. Can you suggest any less interference?—I am in favour of a standard of value, of course. Many people have wished for all sorts of standards. Some people have wished for corn.

4229. But is it not your opinion that that is a less interference than any other?—It is neither more nor less than conferring the same thing as on silver; I do not see the slightest difference.

4230. Then you see no difference between such an enactment as we were speaking of just now and an enactment which obliges the debtor to take either a certain weight of gold or a certain weight of silver, whether he likes it or not?—What I say is that we must begin with some point. In this case silver and gold are both of them used as money in different parts of the world, and that is the starting point, and as they are both used as money, silver in one set of places, and gold in another, we have to start with that fact. The whole question is whether it is wiser to enact these laws in one place for silver and another for gold, or whether to offer each place the alternative of taking whichever people will bring to them of either metal.

4231. (*The Chairman.*) Would you allow, under the bimetallic system, a debtor and creditor to contract that the payments should be made in one or other of the precious metals?—Of course, you might contract to pay in sugar or anything else if you like to make the contract.

4232. You would not forbid that?—You could not forbid it.

4233. (*Mr. Fremantle.*) Could this bimetallic arrangement be set aside whenever individuals chose?—In the same way as you may now set aside your monometallic law by making a contract to pay in pig iron, cotton, or anything else.

4234. What would be the meaning of the bimetallic arrangement unless you were compelled to take 15½ ounces of silver for one of gold?—It depends upon whether you have written in a contract that you owe 500*l.* or so much sugar, cotton, or pig iron. If you have 500*l.* against you, you may get rid of that debt under the bi-metallic law, unless you have contracted for something else, by the payment of gold or silver.

4235. Then there is to be no obligation to take 15½ ounces of silver when there has been an agreement to pay so many pounds?—Certainly there would be, if you had contracted in pounds, but if you had contracted in gold it would be another thing; it depends on whether your contract is in gold, or pounds sterling, or francs, or rupees.

4235*a.* (*The Chairman.*) If a bill were drawn for 500*l.* in gold and accepted, the obligation would be to pay in gold. If it were 500*l.*, without mentioning gold, the debtor might pay in gold or silver?—Yes, and it is known that there are places where bills are drawn in that form, where a debtor is obliged to pay metal in some places, and something else, according to the currency of the place, in another.

4236. Might not that interfere very much with the operation of the bimetallic system in a country where you have long had a gold standard only, and where at the time of your promulgating your law silver bore a different ratio to that which you have fixed by law? Would there not be a danger of the system being to some extent, or a considerable extent, interfered with by contracts of that description?—I understand that at this moment in New York people may pay their bills of exchange if they like, in silver coins, but there is a sort of understanding among the bankers, that they should pay in gold; but practically, I suppose they pay in neither, they pay by cheques, or by a clearing house. Anybody might, if they liked it, pay a bill of exchange with a wheelbarrow or cart load of silver coins, but of course they never do it. But there is a sort of understanding in the clearing house in New York that silver certificates, which are practically silver, are not admitted.

4237. (*Mr. Chaplin.*) As a matter of fact, what I understand you to say is this, that payments now are hardly ever made in the metals themselves, and that whether you had a single or double standard, the payments would be made in the same way in the future?—I think so.

4238. (*The Chairman.*) You gave an illustration of what was done in New York. I gather your meaning to be, that you do not think that it would be likely to interfere with the working of the system in the results you anticipate from it?—No, I do not think it would at all.

4239. (*Sir T. Farrer.*) Do I not understand you to say, that the very essence of your system is that nobody would have any interest in making any contract of that kind?—I cannot conceive that they could have any. If in the great banking centres of New York, and Hamburg, and Berlin, and Paris, and London, they were all accustomed to have the clearances made in silver or gold, very little silver or gold would pass.

4240. It would not be a question of value, it would be some æsthetic consideration?—It seems to me so.

4241. (*Mr. Fremantle.*) Might there not be circumstances, in which gold may be much more convenient than silver?—No doubt.

4242. (*Sir T. Farrer.*) Do you know the history of the Californian currency?—During the time of the war, in California they said they would not have bad currency, and they would go on with the gold currency, although the United States Congress made greenbacks legal tender throughout the Union. They made greenbacks legal tender throughout the Union, and what happened was this, that if you had your bill given you for your hotel in San Francisco, during the war, they presented it to you reckoned in gold currency, and if you had your bill for an hotel in New York presented to you, they presented it to you reckoned in greenback currency. In both cases the amount was paid in greenbacks. In New York you paid the exact sum in your greenbacks, and you paid in San Francisco a greater sum than the bill was given you for, according to the premium of the day. You paid in greenbacks in both places, but in New York you paid the exact sum in dollars that was presented to you, and you paid

in San Francisco so many more. They gave you a bill for your hotel, we will say at four dollars a day in San Francisco, instead of five dollars a day as in New York, and you paid just the same sum, five dollars in greenbacks, according to the exchange, which was more or less the exchange of the moment.

4243. (*Sir T. Farrer.*) Did not the Californian people distinctly refuse to take the greenbacks?—They refused to make them the unit of account; but they used greenbacks; nobody had anything else.

4244. But they refused to use the greenback as the unit of account?—Yes, that is it.

4245. And they made their contracts to pay in gold, or the equivalent of gold?—Yes.

4246. And they passed an Act, I think, in the State of California, legalising those contracts?—I have no doubt the spoken or written dollar there meant the gold dollar, whereas in New York it meant the greenback dollar.

4247. (*The Chairman.*) In the Act which created the gold standard in this country, the recital states that heretofore coins of gold and silver were equally a legal tender in payments to any amount, and great inconvenience has arisen from both these metals being concurrently the standard measure of value. Can you tell me what are the great inconveniences to which reference is there made?—During 1796 and the two years following, there was immense inconvenience from the bad state of the silver coinage, and all those Acts in the latter part of the last century related to the silver coinage, and not to paying debts by silver in bars. As far as I understand the inconvenience, it was solely from the state of the silver coinage, but I could look up that for you.

4248. The silver coinage being depreciated more than the gold?—Yes.

4249. But might not that come about again? Might not the same inconvenience arise under your bimetallic system?—It might, but need not. If the silver coinage was made standard the inconvenience might recur, as it now arises with the gold coinage.

4250. No, but I am saying that under your system it would become standard silver?—I do not admit that it must become standard silver. That would necessitate different laws for the Mint. Of course, if it was very much knocked about, the silver coinage might come to a similar state of inconvenience. It is a question of coins not of "standard."

4251. Was not the inconvenience from the operation of the Gresham law, that it took the less valued metal out of the country?—That was an inconvenience.

4252. And you propose to meet that by saying that if there are other nations who join us, there will be no longer a temptation to send the less valued metal out of the country?—Of course, that would always happen if there was one over-valued.

4253. (*The Chairman.*) Not if it was over-valued everywhere?—Well, during the time there was sufficient difference to make it profitable to send it away.

4254. (*Mr. Birch.*) In 1799 you might pay bills with silver bars?—You might pay your bills with silver bars even then to any extent, an unlimited extent.

4255. (*Mr. Fremantle.*) When silver was sent in to be coined, on more than one occasion, I think, it was refused?—Yes, no doubt it would be so; under the Act of 1798 coinage was stopped altogether.

4256–7. (*Mr. Birch.*) You said something just now with regard to there being no particular utility in gold over silver. I suppose you will allow that in time of war gold is a much more easy thing to move than silver?—I admitted that gold in some cases might be more convenient than silver. I never transported either, but I understand they are transported, not at all according to their weight, but according to their value.

4258. (*Mr. Fremantle.*) Would there not also be the natural result, that the banks would keep their reserves in gold and that the current money would be silver?—I suppose that they would keep their reserves in the metal that people used, and in the metal which people demanded.

4259. They would prefer to keep in gold the reserves against which notes were issued, would they not, because they would take up less room, for one thing?—I should think they would take whichever was the cheapest.

4260. Would one metal be cheaper than the other under the bimetallic system?—We know that there would be slight variations going on; there were slight variations always.

4261. I understood that the contention was that there would be no cheaper metal?—You will not find that in anything that I have said. To go back to Mr. Fremantle's report. The other proposition to which I take exception is, that the fixing of the relative value of gold and silver is an interference with natural law. On this it appears to me that it is neither more nor less natural to enact that a pound sterling shall be 1,751$\frac{3}{4}$ grains of silver, than it is to enact that it shall be 113$\frac{1}{4}$ grains of gold. To enact nothing about either is to leave the two precious metals as commodities, and to return to a state of barter. If it be against nature to enact anything with regard to silver, then you must cease your enactments in India, where a rupee is by law declared to be 180 grains of silver. I venture to think that the bimetallic proposition is unconnected with protection, and neither more nor less against nature than the two separate enactments of the standard in England and India.

4262. Surely that is hardly a full statement of the case. The point is, that it is proposed to enact that 1751$\frac{3}{4}$ grains of silver shall be equal to 113$\frac{1}{4}$ grains of gold?—I have never said that. Nobody has ever said that they are equal in any way. What we say is, that a pound sterling shall be either the one or the other; the effect of that may be to make them equal, but that is not the enactment.

4263. (*The Chairman.*) Equal in this sense, that any person who has to receive one pound will be compelled to receive either?—Yes, but not equal in the sense that a man may choose which he has.

4264. (*Mr. Courtney.*) Equal in the power of paying debts?—Equal in the power of paying debts, before payment, that is all.

4265. That is a very important equality?—Oh, very.

4265. (*Mr. Fremantle.*) The pound sterling is to be so many grains of silver, or so many grains of gold, and that you consider is to be the same as saying that it is so many grains of gold. Is not that the point?—The point is concerning a state of nature surely, and the assertion is that it is against nature. Well, my idea is that it is neither more nor less against nature; if the one is against nature the other is.

4267. At present gold is worth about 20 times as much as silver, and you propose by law to give it 15$\frac{1}{2}$ times the value of silver. Is not that going against the natural law?—Before you can say what the relative value of gold and silver is you must demonetize gold, and when you have done that, you will have some other thing than the money standard to tell you what the relative value is. At the present time, the privilege of the law having being conferred on gold and taken away from silver, the ratio is 20 or 21 to 1, but you cannot say what the natural ratio would be unless you demonetized gold first.

4268. Then you consider that having gold as the sole standard here, puts a fictitious value upon it?—I would call it an artificial value.

4269. (*The Chairman.*) All that you do in fixing the weight of your pound sterling is to fix what a pound shall mean when people are dealing with one another, in pounds sterling of gold, at present?—Yes.

4270. You do not touch any law at all, you simply fix when people contract in sovereigns what that shall mean, whether it shall mean sovereigns of such and such a weight?—Yes.

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4271. If you now enact that a person who had contracted to receive so many sovereigns (which had meant, at least since 1816, only so many pieces of such and such a weight of gold), may be compelled to receive such and such a weight of silver, do you not proceed somewhat beyond the step you have taken in saying that the pound sterling shall mean such and such a weight of gold?—It is of course an alteration. Every enactment made would be so, and has been, whether by suspending cash payments, or by resuming them, or by making the Act of 1844, or by any other one in regard to currency. Numerous alterations of that nature have been made, and I do not see how any alterations in currency can be made without some such effect.

4272. (*Sir T. Farrer.*) When you have either monometallic system, the gold system, or the silver system, you do not fix the relation of value between either gold and silver, or any other commodity, do you?—No, certainly not.

4273. But when you adopt your bimetallic system, you do practically fix the relation of value between gold and silver, do you not?—So you do when you make silver legal tender up to forty shillings, and copper up to twelve pence.

4274. That is token coinage, but it is a perfectly different thing when you say that for the purpose of paying debts a certain quantity of gold shall be equal to a certain quantity of silver. That is a further step. I am not saying it is not a right step?—You do not say anything about the relative value of gold or silver.

4275. But when you say a person may pay his debts at a fixed ratio, in one or other, you do practically fix the relative value of gold or silver. I am not saying that is wrong at all, but I am only saying it is a step beyond what you do in the monometallic system?—It seems to me to be exactly the same. By experience we know that it does, with certain small variations, fix the relative value of gold and silver. If that is an objection, it must be shown what the objection is. As far as I can see, given that a large portion of the world use gold and another silver, it is a very great benefit to all classes of the community.

4276. (*The Chairman.*) I was only criticising your argument that you were doing precisely the same thing, and no more, when you were creating the double standard with a fixed relation of one metal to the other, as you were doing when you simply defined how much a pound sterling should mean?—It does not appear to me to do more.

4277. A man who is down to this time entitled to receive gold shall be bound to receive a certain weight of silver as an equivalent for that gold which he had a right to demand. That is a further step, surely?—If it is a further step it is in the right direction. It is admitted, I believe, that the less the variations of the standard metal or metals the better, and that with this double standard the variations would be somewhat less. This is Jevons's admission.

4278. (*Mr. Courtney.*) Is not this your argument: supposing neither gold nor silver was adopted as the standard of value, gold and silver would be produced and would be exchangeable as commodities, at some ratio continually varying. There is at any moment, let us say, a ratio of 18 to 1. It is then determined that gold shall be made the particular metal by which debts can be discharged to any amount, and the only metal through which debts can be discharged. That gives a new and peculiar importance to gold, and making it demanded for the purposes of currency, would send up the ratio from 18 to 1 to something different, perhaps to 20 to 1. The mere fact of conferring upon gold that power of solving payments, that is your argument?—Yes.

4279. So that in selecting gold and saying that gold shall be coined in pieces of a particular weight, you do something which by that very act does disturb the relation of gold to silver; that is your argument?—Yes.

4280. Then you say nothing more is involved if we adopt the same thing with respect to silver, and say that silver as well as gold shall be the means of payment of debt, at particular weights of silver and particular weights of gold?—Yes.

4281. Although that may bring back the relation between gold and silver to a practically permanent relation of 15 to 1?—Yes.

4282. (*The Chairman.*) That would be so, no doubt, so far as regards all contracts made after you so alter the law; everybody would contract with regard to the new state of the law, knowing it, understanding it; but where you have fixed a pound sterling as meaning so much gold, and that anybody having contracted for so many pounds sterling has contracted for so much gold, and you pass a law providing that every person that has so contracted shall nevertheless be bound to take silver, you do affect all contracts which have been entered into prior to your bimetallic law, and subsequent, at all events, to the law of 1816?—I repeat that every single Act of that nature does the same thing. Nobody said, when the suspension of cash payments took place, that the contracts begun should be started afresh; nobody said, when the Act of 1816 and the Act of 1844 were passed, that they should do so. A case of this kind seems to me to carry that with it.

4283. The Act of 1816 did not alter the gold standard, did it. It made gold the standard, but it did not alter the meaning of the pound sterling of gold, did it?—The Act of 1816 brought gold in as the sole standard for the first time. A pound sterling originally meant a pound weight of silver. The various enactments of English mint prices assigned a given proportion of gold to the old silver standard.

4284. The amount of gold that should be contained in the sovereign, fixed then, was not fixed then for the first time?—No. The amount of gold in the sovereign is a Mint question, not one of standard.

4285. The law made it the sole standard, but it did not alter the meaning of the pound sterling in gold?—No, but all the debts at that time had been contracted in paper; the greater part of the national debt had been contracted in paper.

4286. (*Mr. Courtney.*) The question of the chairman rather refers to the effect which the adoption of one or the other metal, or both, might have upon the meaning of contracts, but we are here considering the question of the adoption of one or the other upon what is called the natural law. We have allowed that the adoption of gold exclusively does alter what would be the relative value according to natural law by enhancing gold?—Yes.

4287. Well, suppose that step and that only taken, we know that there still remains a considerable fluctuation in the market price of silver and gold. That is what we are suffering under or rejoicing under now; silver relatively to gold goes up and down a good deal?—You assert that.

4288. Will you allow me to assume it?—You may assume it.

4289. If the united nations went on to declare that silver should pay debts as freely as gold in the ratio of $15\frac{1}{2}$ to 1, would not the effect of that be in the future to prevent, except within very narrow limits, the variations of price which we have known, or which you accept from me as a fact, within the last 20 years?—Very likely that will be so.

4290. So that there is a little greater interference with natural law, because at present there are fluctuations which you would prevent?—I say, taking the general principle, the general principle seems to be the same, but I will admit everything you say to be true.

4291. (*Mr. Chaplin.*) But is it not your contention that whatever fluctuations there are at the present moment which the adoption of the bimetallic standard would obviate for the future, are owing to the fact that gold has had this fictitious value given to it already by law?—Certainly.

4292. (*Mr. Courtney.*) But I think you would allow that there would be considerable fluctuations if

neither gold nor silver had been adopted as the currency?—I presume so.

4293. And therefore the fluctuations cannot be ascribed solely to the fact that gold has been adopted as the standard and not silver?—I ascribe the fluctuations since 1873 principally to that fact.

4294. (*The Chairman.*) It is true that one standard has been adopted here and in some other countries, but the other standard has been adopted elsewhere, the proportion being something like half and half; so that at the present time we may say, if you take the whole world over, the gold and the silver have about equally had this fictitious value given to them?—If that were so there would be no variation.

4295. (*Mr. Chaplin.*) But as regards Europe is it not the case that the fluctuations in the relative value of gold and silver have mainly arisen, or have at all events largely increased since one metal has become the standard?—I think so, yes.

4296. (*Mr. Fremantle.*) One metal has become the standard, no doubt, in many parts of the world, and that metal gold, but in the United States, on the other hand, the Bland Bill has made it imperative that the Government of the United States should coin about 5,000,000*l.* sterling of dollars every year?—Yes, but you must recollect that the Act making gold the standard of the United States had only been passed two or three years before, and never was in force. Up to that time there had been the double standard there.

4297. There was this arbitrary interference with coinage, that whether the silver dollars were wanted or not, the Bland Act made it obligatory upon the United States Government to coin nearly 5,000,000*l.* sterling worth every year?—Yes.

4298. Well, then, since that time it is a fact, is it not, that the gold price of silver has gone down in the market?—Yes.

4299. If that is so, how would you account for the fall in the price of silver?—Because the demand for gold has been much greater.

4300. But is not this demand for silver a very large one?—The demand for gold is unlimited. By the Bland Act that of silver is limited.

4301. (*Mr. Barbour.*) We have had some talk about the ratio which would be established, by what I believe has been called the natural law between gold and silver, that is supposing neither gold nor silver was coined or made a legal tender; I believe silver at any rate and perhaps gold has been coined in Europe for more than 1,000 years?—Yes.

4302. And I believe there is every probability that in future both will be coined?—I believe so.

4303. Do you think there is any profit to be got from speculating what the ratio would be under circumstances which have not existed for a thousand years, and are not likely to exist in the future?—I do not think there is the least profit in it.

4304. (*The Chairman.*) Then the third point that you wish to make some observations upon is the position of London as the monetary centre of the world in relation to commercial transactions?—It has been for years the practice to open credits in London for shipments to and from various places when each actual transaction was in no way connected with London, *e.g.*, cargoes of coffee from Brazil to New York, or tea from Shanghai to San Francisco, would be paid for by drafts upon London. It has been asserted that this banking monopoly arises from the speciality of the gold standard of England, and supposing this to be correct, it is manifest that the trade or craft of foreign banking in London to the extent of the advantage of the gold standard, is being protected by that institution. I entirely deny that the two things are connected in any way. I believe that the monetary supremacy of London is due to far different causes, but conceding for the sake of argument that the gold standard is the cause of it, I venture to submit that it connects protection with the controversy in a way not contemplated by the Treasury. It may be said that the date of the gold standard is 1816, and it can scarcely be asserted that the monetary supremacy of London was in existence at no earlier period. In my opinion it is due,—I. To our enormous capital and commercial practice; II. To our insular position, and immunity from war within our borders; III. To the character and capacity of our merchants and bankers. I may also say that Lord Ashburton gave evidence before the Committee for Coin, on the 26th of April 1828, much to the same effect, and besides that he thought it was rather an inconvenience than not, the not having silver as well as gold in our vaults in London.

4305. (*Mr. Birch.*) That was principally with reference to India, I think, and the facility silver offered for drawing gold from the Continent?—It had no reference to India.

4306. Lord Liverpool, in his treatise that we had the honour of publishing, I think particularly refers to gold as being best adapted to England, so distinguished for its affluence and its commercial connexions?—He proposed that gold should be the standard because, on account of our commercial supremacy, we could afford to have a gold circulation.

4307. (*The Chairman.*) That closes the special points to which you wish to call attention. With regard to the general question of the expediency and possibility of introducing the bimetallic system into this country, I understand that you agree with the evidence that has been put before this Commission by Mr. Gibbs?—Almost entirely; I think you may take it that that is my evidence as well as his.

4308. (*Mr. Barbour.*) Have you formed any opinion as to what would happen, what the effect would be on the ratio between gold and silver, if the Americans ceased to coin silver as they are now doing?—I think there would be a very great further fall in silver; but I have received an immense amount of information on the subject of the probability of that cessation, and I think you may almost assert now that they will not do so.

4309. And not merely would more silver be thrown on the market, but there would be an additional demand for gold, because the silver that is coined now occupies a place in the currency which would to a greater or less extent have to be filled by gold; there would be the double effect?—I should think so.

4310. It would probably have a serious effect upon the ratio between gold and silver?—Yes.

4311. And you know, of course, that the Secretary of State for India draws a very large sum on India every year, from 13,000,000*l.* to 16,000,000*l.* sterling?—Yes.

4312. Which to some extent takes the place of remittances of silver?—Yes.

4313. If the Secretary of State ceased for any reason for a year or two years or three years to draw that amount on India, would not that have a very disturbing effect on the ratio between gold and silver?—I should think very great indeed.

4314. You would have a very great temporary fluctuation in exchange?—Yes, certainly.

4315. Would that have a very disturbing effect on all business transactions either one way or the other?—With India, certainly.

4316. (*Mr. Chaplin.*) I should like to ask your views upon the statement that there has been an universal fall in prices. Are you aware that the recent Commission on the Depression of Trade reported to the effect that since 1873 there had been a fall in prices in this country, and especially in the value of the exports and the imports between 1873 and 1883. Would that agree with your experience?—Certainly.

4317. Have you formed any general idea as to the extent of this fall?—I wish to say that I am not a statistician, and I lean entirely upon those statisticians whose figures I have generally found to be correct. But with regard to the fall it seems to me that in the first place the general law would indicate that there was bound to be a fall; in the second place it is a fact that there has been a fall, and in the third place, if I am to choose between the figures of Mr. Giffen, Mr. Jevons, *The Economist*, and Mr Goschen on

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the one side, and those of Mr. Forsell and Mr. Mulhall on the other, I can only say that I rely on those of the former. I believe the index number statement of *The Economist*. None of the authorities I have mentioned are, to my knowledge, bimetallists.

4318. Has this fall, in your opinion, resulted either wholly or partly from the changes in the standard of value?—It is my opinion, that it has to a very considerable extent arisen from the alterations in the standard of value.

4319. How much of this fall in prices would you say can be fairly referred to this change in the standard of value? Can you form any opinion upon that?—It would be very difficult to pledge myself upon how much it is, but I think the general fall in prices is about equal to that of the fall of silver in gold.

4320. What is the fall in the price of silver?—I think it is about 25 to 30 per cent.

4321. Then your opinion is this, that there has been a general fall in prices to the extent of between 25 and 30 per cent.?—I think so, yes.

4322. (*Mr. Courtney.*) Silver prices are steady?—Silver prices have fallen too, slightly.

4323. (*Mr. Chaplin.*) Now could you give us an instance of any particular production which would illustrate this?—I could give you one that I am interested in myself, which is copper, but I am very sorry I am unable to produce statistics, which I hoped to have done, to show what the exact increase in production in that commodity was during the time of the effects of the gold discoveries, but strangely enough there are no such returns to be found anywhere, therefore I have been unable to put them in. I should say that the fall in the price of that commodity is about 50 per cent. from 1870, and I think that about 25 per cent. is due to increased production and about 25 per cent. to the change in the standard. I may say that it is a very singular fact with regard to that commodity, that between the years 1847 and 1858 or so, about that decade, the production of copper increased most enormously, and yet the price kept continually rising, whereas between 1880 and 1884, although there was some increased production, the visible stock rather decreased, and yet the price kept falling. Since 1884 the production has increased in America most enormously, and prices have therefore naturally fallen also. I may also say that the shipments of that commodity to India are in precisely the same condition as the shipments of manufactured goods from Lancashire to India in regard to exchanges and so on, and therefore I need not go into that again, because it has been sufficiently explained by Manchester manufacturers. But I may repeat, with regard to the bonus which is supposed to have been given to producers of wheat, &c. in India, and of which we have heard so much, that precisely the same thing occurs in Chili in regard to the production of copper. I think I may assert that with the present fall in that commodity, a very large portion of the mines in Chili would have been shut up if they had not been on the basis of the depreciated currency which is now the law in that country. A great many mines quite as good as those in Chili have been closed in Australia and other places in consequence of the great fall, and the same thing would have happened in Chili if they had not been on the basis of the paper currency, and if they should resume cash payments the effect would certainly be that the mines in that country would have to shut up.

4324. I may take it, then, that you consider beyond doubt that prices are influenced by an expansion or contraction of the volume of legal tender money, and that they would rise and fall with that volume?—Yes, that is my opinion.

4325. In other words, I suppose you would say that money is dear because money is scarce?—I consider that money is dear and scarce in the economic sense; but not in the sense that the word dear and cheap money is used every day in the money articles of the papers, because money is excessively cheap in that sense.

4326. You said, I think, that you agreed with Mr. Gibbs, generally speaking, in his evidence, therefore perhaps I need hardly ask you whether you trace the disturbance in values to the legislation of Germany and subsequent legislation abroad in demonetizing silver since 1873?—I consider the action of the closing of the Mints to silver in France following on the demonetization in Germany was the main cause.

4327. Then, as matter of fact, in your opinion the entire scale of prices has been suddenly affected, since 1873 by the fact of that foreign legislation?—Yes.

4328. While you say that we, as we have always been gold monometallists for so many years in this country, did not feel the scarcity of money and recognise the effects of this before 1873?—The effects on prices in a similar or analogous manner were felt after the enactment of the gold standard and the resumption of cash payments in 1816 and 1819, but the real reason, I think, why this particular phenomenon was not to be observed was that all the silver in the world that was mined could find its way to some of the open Mints of the countries of the Latin Union, and could be coined in those Mints into legal tender money, therefore when so coined it increased the volume of the general currency of the world to that extent, in the same manner as when gold was discovered.

4329. I think you have told us this afternoon that the coinage demand for either gold or silver is a chief factor in determining their price and their value?—I think so.

4330. I want to ask you a question about the ratio between gold and silver, the ratio of 15½ to 1. What was it in the first instance that fixed that ratio? Was it arbitrarily settled by law, or was it caused by any difference in the cost of production of either of those metals?—The ratio has been fixed by law, but for a great many years in this country it was the opinion of the leading economists that the statement of Ricardo was correct, namely, that the reason gold was 15½ times as dear as silver was that it cost exactly so much less to produce silver than gold; and that opinion was adopted by most of the economists up to the time of John Stuart Mill. He stated that the difference between the precious metals and all other commodities was, that the value of the former depended not upon the cost of production directly, but upon the quantity produced, which quantity produced ultimately would be settled in long periods by the cost of production. In my opinion this turns out again to be doubtful, for we find according to tables before us that between 1803 and 1873, the quantities produced of gold and silver varied enormously, and at the same time the relative prices changed very little. I think, therefore, it is conclusively demonstrated that the reason why the ratio was 15½ to 1 was purely owing to the Mint laws of the various countries, and not to the relative cost of production.

4331. Is it not the fact that all the silver produced by any mines in the world could, before 1873, be taken and actually was taken by the free Mints of the Latin Union, and in this way all the silver that was produced was added to the legal tender money of the world?—I believe so, to the volume of the currency.

4332. Then, as long as that position was maintained, without any effort whatever on the part of England, there was no necessity for this country to entertain any proposals directed to secure an international monetary policy?—No, there was no occasion whatever; it was perfectly satisfactory, apparently, on all sides.

4333. Well, then, is it not the case that since 1873 the position has been entirely changed, and that no legal tender silver at this moment is now being added to the money stock of Europe?—I do not say none is, because the Latin Union may coin some. They are, however, limited in the amount.

4334. (*Mr. Fremantle.*) That is to say, standard money; large amounts are added, are they not, as token coin?—Yes.

4335. I think you said you had no fear whatever that the operation of the Bland Bill was likely to be suspended?—From what I hear I think it is almost impossible that it should be suspended.

4336. But supposing it was suspended, do I gather from you that the effect of that suspension in your opinion would be to cause a still greater fall in the value of silver?—Certainly, and in the exchange with India.

4337. And that all the evils which arise from the present system, in your opinion, would be proportionately increased?—Certainly.

4338. (*Mr. Courtney.*) You said that Mr. Mill was wrong in thinking that the relative values of the precious metals were due to the cost of production, but that in fact they were due to the establishment of Mint prices?—What I said was, that Ricardo was wrong in asserting that it was only due to cost of production, and that Mill qualified Ricardo's assertion by saying that it depended not absolutely upon the cost of production, but upon the quantities produced.

4339. Both, in your opinion, had imperfect if not erroneous views, because you think that the relation between the two metals was really determined by the Mint prices?—By law, yes.

4340. Might we perhaps say that in truth the establishment of Mint prices practically regulated the cost of production of the metals produced, in the least profitable form, whether gold or silver?—That is a very difficult question to answer, because many people will tell you, that the whole mass of gold and silver is produced at a loss altogether.

4341. True, but there is always a degree beyond which people will not go?—Yes, quite so.

4342. And the limit line that is fixed, of least remuneration, or of the limit of loss that they can suffer is determined, in the case of the two metals, by the Mint price?—I think so.

4343. So that if we established again a relation of 15½ to 1 between silver and gold, the effect might not improbably be that certain gold mines which are now perhaps working at a loss would come to be worked at a greater loss and would be abandoned?—I should be sorry to assert that. It might be so.

4344. That is conceivable, if it had any effect upon the production of the two metals, it would be to go to the least profitable gold mines?—Yes.

4345. Because you are establishing a relation of silver to gold which is greater than that which now prevails?—Yes, that is conceivable.

4346. (*Sir T. Farrer.*) I rather gathered from your answers to Mr. Chaplin, that you think prices have fallen somewhat like 25 per cent. in consequence of the appreciation of gold?—Yes.

4347. That arises from the fact that the demand upon gold has increased in proportion faster than the supply?—Yes.

4348. When we talk of the supply of gold, there is this great distinction, is there not, between the precious metals and other things, that the precious metals are not consumed, so that we have to deal with comparatively permanent quantities?—That is so.

4349. And you must look to the stock of these metals, and not only to what is produced every year?—Certainly.

4350. (*Mr. Barbour.*) Do you think that the stocks of the precious metals which are hoarded, buried in the earth, or in ornaments, watches and chains, and so forth, have any effect upon prices?—I cannnot answer that question.

4351. (*Sir T. Farrer.*) I find that, according to Dr. Soetbeer, the production of gold, during the 358 years from 1493 to 1850, was about 660,000,000*l.*, and I find that the production of gold between 1851 and 1885, 35 years, was 890 millions, that is to say, that in these last 35 years, the quantity produced was one and a third more than all that had been produced in the previous 350 years. Now I suppose you would agree that of the stock produced before 1850, a very large quantity would be lost, sunk, hoarded, and not available for the purposes of commerce?—I do not think I can answer that.

4352. You would not think that the whole of the gold that was produced between 1493 and 1850 would be in use in 1850?—No.

4353. And in the same way there would be a certain contraction between 1851 and 1885?—Yes.

4354. But more during that longer period than during the shorter period. Then we have an extraordinary demand during the last 15 or 20 years, which is estimated by the statisticians at something like 200,000,000*l.* for the coinage of the different countries?—Fully that; 250,000,000*l.* I should call it.

4355. Well, say 250,000,000*l.* Then you have, as produced during the last 35 years, 890,000,000*l.*?—Yes.

4356. Suppose you assume that the 250,000,000*l.* of extraordinary demand is a new demand altogether, then deducting 250,000,000*l.* from 890,000,000*l.* you have 640,000,000*l.* left as produced within the 35 years which are applicable to current demands for coinage for manufacture, and so on. Is not that so?—Yes.

4357. Therefore since 1850 a considerably larger sum of gold has been added to the whole stock of gold in the world than would have been in existence in 1850, if the whole of the gold produced before that time had been available?—Unquestionably.

4358. Well, then do you think that the demand for current purposes, since that time, is so great as to cause a greater scarcity than we had experienced before?—Certainly, very much greater.

4359. Enough after all that addition to the stock of gold in the world to make gold scarcer than it ever was before?—Yes, scarcer than it was before the demonetization of silver in 1873.

4360. Even though there have been in all the great trading nations very great economies in the use of gold?—What do you mean by economies in the use of gold?

4361. Let me illustrate what I mean in this way. You will admit that in backward countries much more currency is used for the purposes of trade than is used in countries which are more advanced?—I do not agree with that at all.

4362. You do not think that in England and the United States the quantity of gold in proportion to the transactions is much less than it is in less advanced countries?—At this moment I believe there are various economies, which are called economies in banking, and one especial branch is the use of credit, such as bills of exchange. I believe the bills of exchange in the internal trade of this country, in proportion to its amount, are much less than they were 40 years ago.

4363. But are they not replaced by bank cheques?—That may be so. All those economies you suggest may have had a very great effect on the one side, but on the other side I believe, in the internal trade of the country, there are fewer bills used than there used to be.

4364. (*The Chairman.*) Do you mean that they pay more in cash?—In cash a great deal.

4365. (*Sir T. Farrer.*) Have you any proof of that?—I believe it is very difficult to get proof. Mr. Palgrave, I think, was for years endeavouring to make up some return on the subject of the number of bills of exchange. I can only say, in regard to any trade I am connected with, that the use of bills of exchange is much less than it was, and the payments in cash much more frequent.

4366. But when you say payments in cash, are they payments in gold or notes, or payments by cheque?—Payments by cheque.

4367. Do you call payments by cheque payments in cash?—I only say by cheques on the one side, and as a substitution for bills of exchange on the other. That being the case, it has no effect on the one side or the other.

4368. (*The Chairman.*) A cheque is a bill of exchange you know, and therefore whether it takes the form of a bill drawn on the person to whom goods

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have been sold, or on the banker, it is done by bill of exchange; but do you mean that in place of either bills of exchange or cheques, money, gold and silver, Bank of England notes are paid?—I mean that in place of bills of exchange, cheques are now used.

4369. (*Sir T. Farrer.*) But in the wholesale transactions of this country, does any gold or do any bank notes pass?—Very little; but as much as before 1873, with the exception of payments for cotton in Liverpool.

4370. Is not the business done entirely at the clearing houses?—Yes, entirely.

4371. Therefore no cash passes?—No.

4372. Therefore when Mr. Chaplin asked you as to the demand on the quantity of money it is not the quantity of money simply that is in question, but the quantity of money in proportion to the demand for it?—Yes.

4373. Therefore if the demand for it is decreased by all these expedients, the same quantity of money will go a great deal further, will it not?—That would explain a rise in prices, but we have got to explain a fall in prices. Every addition to credit that is made would naturally increase the volume of that which was current in the country, and if prices had gone up immensely, you might say one of the reasons was the economies in banking.

4374. You are stating that there has been an extra demand upon the gold of the world, that the demand has grown faster than the supply; I am asking you whether the demand is not diminished by all these expedients for saving gold and saving notes?—Yes, but prices would not have fallen, they would have gone up.

4374*a*. (*The Chairman.*) That is reasoning in a circle surely. You assume that the two things are connected, you say there cannot be these economies, there must be more demand for precious metal, because prices have gone down. One wants to know whether there is any connexion between the two things such as you suggest; you must surely investigate each of the two facts independently?—The two facts you wish examined independently are (1) the fall in prices, (2) banking economies. I have already answered as to the first, and as to the second my answer is, banking economies have been in full progress both during the rise in prices and during the fall. I have no doobt they intensified the rise, and have relieved the fall.

4375. (*Sir T. Farrer.*) I should like to ask you this further question in regard to the economies in the use of gold. Mr. Gibbs has said that this country was fully banked before 1873, when prices began to fall, but assuming that we had a complete system of banking and clearing, is not that a system which expands of itself with the wants of commerce; it is not simply that you have a clearing system which in 1870 clears all the then transactions, and will not clear any more, but it is a system which as the number of transactions increases clears the larger number just as it did the smaller number of transactions at the earlier date?—It is very difficult to verify all the facts as to what some people call banking economies. Some are known and some are unknown. The precise amount of gold in people's pockets cannot be known, the diminution of bills of exchange, in proportion to the business done, is asserted, but precise information is not attainable. There are, however, some particulars which can be had, and one is theamount of notes in circulation. I made a comparison of the fiduciary circulation in 1845 and 1886, by which it appears that the amount of fiduciary circulation was legally, in 1845, 32,000,000*l*., whereas it was in 1886 only 30,250,000*l*., or a diminution of 1,750,000*l*., but the diminution in the actual fiduciary circulation was, in round numbers, 6,500,000*l*. The gross circulation of notes, whether on gold or securities, increased during the same period about 3,500,000*l*. If you add the diminution of the actual fiduciary issue to the increase of the gross circulation you arrive at a figure of 10,000,000*l*. This amount would indicate the extent to which contraction of that form of credit instruments rather than expansion had taken place. What you say of the clearing house may be true.

4376. (*Mr. Courtney.*) Would not a clearing system clear with the same facility an exchange of 500,000,000*l*. as an exchange of 300,000,000*l*. in the course of a week?—You must ask those who have studied that. I believe of course an increased number of banks require so many more reserves of cash.

4377. (*Sir T. Farrer.*) I would ask you now, after looking at the figures that I have given you, to consider how you think it is that the scarcity of gold or the increased demand for gold, in proportion to the supply, has arisen?—I would answer that I believe the scarcity of gold, and the fall of prices to be absolutely convertible terms, and that there is no other meaning in the appreciation of gold and the fall in prices, they appear to me to be absolutely synonymous.

4378. Then I would ask you another question, whether prices do not depend on the quantity of the commodities as well as upon the quantity of gold?—That is quite compatible with the other; all I mean to say is that the two things are absolutely the same. The appreciation of gold and fall of prices are absolutely synonymous to me.

4379. The appreciation of gold, and the fall of prices are synonymous, but though they are one and the same thing, that one thing may arise from very different causes?—They may arise either from increase of commodities, or increase of gold, or *vice versâ*.

4380. Taking those two causes, it may arise from a scarcity of gold on the one hand, or an abundance of commodities on the other?—Yes, and I have already said that in one particular commodity I consider it is about half and half.

4381. (*Mr. Fremantle.*) You said just now that you thought the disturbance in the relative value of gold and silver was due mainly to the changes made in foreign mint regulations?—Yes, or laws relating to "the standard."

4382. But are there not also natural causes for such a disturbance in the amount of silver and gold which has been produced of late years?—What do you mean by natural causes?

4383. The amount of gold and silver which has been dug out of the earth?—As long as the mints were ready to coin either metal it did not matter how the production varied.

4384. Then you think that it would have made no difference, if the foreign mint regulations had remained as they were, that the production of silver in the world has increased from the date of the great gold discoveries from 8,000,000*l*. to 25,000,000*l*. a year, while the production of gold has fallen from 30,000,000*l*. a year to about 20,000,000*l*.?—Upon the figures you give me prices ought to have risen under the old arrangements. The variations of the supply in quantity of gold and silver between 1873 and 1884 have varied much less than they did during the time that prices did not change at all.

4385. There was some disturbance, was there not, in the French arrangement, at the time of the great gold discoveries in 1851; that is to say, that silver was in great demand for the East, and went in large quantities to India, and that if it had not been for other causes intervening at that time silver would have probably gone to a premium?—I cannot say what it would have gone to, but all I can say is that the variation was extremely small.

4386. But there were such things as variations in prices?—If you mean in the relation of silver to gold, there was a variation in 1832 which was much greater than anything that took place from the gold discoveries in 1851, rather from political reasons I think.

4387. Then you would not be disposed to attach any importance to the amounts of gold and silver which were produced, relatively, so long as the old European mint system had been maintained?—I should not say none, but I think the importance of it is less when you depend on two metals, than as now, when you depend on one.

4388. (*Mr. Courtney.*) I think you allowed in answer to my question that if those relative mint prices were retained the production of gold and silver would be regulated so as to correspond to them?—I think I said it would have something to do with it.

4389. (*Mr. Fremantle.*) Did I understand you to say just now, in answer to Mr. Chaplin, that the whole of the silver produced in the world was coined under the system of 1873?—No, was open to coinage.

4390. What would be the effect on production if the coinage of silver were restricted?—I believe a great deal more silver and gold is produced than pays for the production, therefore I do not suppose a rise in the value and a mint here and there would increase the total volume of it very largely.

4391. Would not the production of gold be very likely to be diminished?—I have heard people say so. I do not myself think so for the same reason that I think people look on gold and silver without any great reference to its cost.

4392. Would not there be a probability that the mints would be flooded with silver sent in for coinage?—I do not know that the French mints were flooded, but if the bimetallic system ruled over the whole world that would give of course a great deal more opportunity for coining silver. I am afraid we must go back to the old question. If the mints were flooded with silver the question would be, where would the gold go to, and I have never found any body who can tell me that. A great deal has been said upon the island of Jersey, and I should like to ask whether the monometallists really think that if the inhabitants of the island of Jersey had a fancy for a gold coinage, they could suddenly draw all the gold out of England and America and Germany and France.

4393. But a large amount of gold is already hoarded in India, is it not?—Yes, I believe so.

4394. In your opinion would not a change to the bimetallic system increase the amount likely to be hoarded in gold?—I believe the increase of the hoarding of gold in India arises from a suspicion in the minds of those who hoard it, that the gold standard may be enacted in India, and they wish to get the profit on the change. If there was a bimetallic system in the five greatest nations in the world, and the Indian Empire, I do not suppose any Indian would care to hoard gold any more than silver, unless for ornaments and such class of things.

4395. Apart from such circumstances, is there not a demand for the arts and manufactures which would be likely to lead to a premium on gold?—If everybody grew so rich as to have a fancy to have gold ornaments of course there might be.

4396. There might be a different proportional value between gold and silver for other purposes than coinage?—The stock of gold is 800,000,000*l.* If we had 800,000,000*l.* of ornaments, of course that would be so.

4397. Without our having the whole 800,000,000*l.* as ornaments, there might still be some change in the relative value?—There might be some change.

4398. I see that in the preface to the volume you have published with Mr. Gibbs you say that "it may "be useful to recur to the arguments of two of the "guardians of English currency" on this question. By the "guardians of the English currency" you mean directors of the Bank of England?—Yes, ex-governors.

4399. I presume we may take it that your views are not the expression of the opinion of the court of directors of the Bank of England?—I have never said they were, and I have always said they were our own individual opinion.

4400. (*Mr. Houldsworth.*) You hold that there was a great steadiness in the relative prices of silver and gold before 1873 for a very long period?—Yes.

4401. And do you hold that that was in consequence of the bimetallic law being in operation?—Well as far as this century, and I think the last, was concerned, I do certainly.

4402. Do you hold that the bimetallic law in its existence over a partial area will have the full operation in steadying the relative prices of silver and gold in countries which do not adopt it?—If countries of sufficient importance, of course not the island of Jersey, but if we had the United States and the Latin Union agreeing together, without any reference to us or Germany, I think it would have that effect at once.

4403. If England adopted the bimetallic law, and no other country did, would that be sufficient to steady the relative price?—I have not the slightest doubt if the British Empire did it would be quite sufficient without asking the other nations to join.

4404. And you would recommend the British Empire to adopt that; believing that the results would be satisfactory to England and also would have a good effect over the world?—No, I have always said that it would be unjust to ask England to do it at least unless Germany, the United States, and France did it. I do not see why we should change our standard unless that was the case.

4405. Then you think there would be some ill effects to England under those circumstances?—Merely the ill effects of the change which was not absolutely necessary. I think that other nations should ask it of us rather than that we should change our standard without reference to other countries.

4406. Still you have a very definite opinion that the bimetallic law would have the practical effect of steadying the relative prices of silver and gold on the Continent, and in the United States, if the British Empire adopted it?—I have not the slightest doubt about it.

4407. Suppose now that there is a consensus of opinion amongst the large nations of the world, and that they are disposed to join together in adopting the bimetallic law, have you any opinion as to what ratio should be adopted?—The United States legal ratio at this moment is 16; they are willing to go to the 15½. The Latin Union legal ratio is 15½, and so far as thalers are a legal tender in Germany the ratio there is 15½: and therefore I think that notwithstanding the apparent injustice in altering the ratio which exists now to 15½ to 1, the objections to that would be less than attempting to bind the two metals together at any other ratio, in fact, I doubt whether it would be possible.

4408. Would you expect any very sudden effect on prices if it were adopted?—No, I think it would take some time to affect prices.

4409. Have you any opinion as to what effect the appreciation of gold has had upon wages?—Wages must be considered in two categories. I. the amount given for particular work done, and II. the number of workmen employed. The two together would make the wage fund. I agree perfectly in the assertion that the rise or the fall in wages takes place some time after any great change, so far as particular work is concerned, but on the numbers of people employed I think the effect is much more immediate.

4410. Do you think we have had the full effect of the appreciation of gold yet upon the wage fund?—No, I do not think we have or anything like it, in fact I should not wonder before many months are over that we found a very great increase of that effect in the shape of the diminution of masses of workmen employed.

4411. And also upon the rate of wages?—And then necessarily the rate of wages will go still more slowly.

4412. (*Sir T. Farrer.*) Are you aware that in America, where there was also a fall of wages and cessation of employment, that both are said to have recovered, so that both are as great as before the fall, if not greater?—You must be quite aware that there are great fluctuations in trade of this kind which take place, over short spaces, in all countries, which are quite different to those which are spread over very long periods. And it is extremely difficult for any body to assert positively that a breakdown in this

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trade or that is due to long or short causes, and I should be very sorry to assert anything about it.

4413. (*The Chairman.*) Do you mean to represent that in all employments there is a diminution in the number employed?—I am talking of the larger trades you know, such as agriculture as a whole, and coal as a whole.

4414. Well, now, take collieries, I should like to ask you whether there are not as many men employed in the collieries now as there were 10 years ago?—Not in any district that I know anything of. I only speak of the districts I know of. I am quite certain numbers of collieries are shut up.

4415. Yes, but there are new ones too; there are collieries that have come into work lately?—An enormous number came into operation after the high prices of 1873, and a portion of them have been shut up since.

4416. (*Mr. Houldsworth.*) Are you in a position to tell us whether the employment has increased in proportion to the population?—I have not got my wage statistics with me.

4417. Because, though the volume of trade might be increasing and the volume of trade is greater, if it was not in full proportion to the increase of the population, then there would be the state of things that you have represented that there would be?—More people out of employment.

4418. (*Mr. Courtney.*) Upon the last question that was raised you said it was anticipated in the course of the next few months in all probability that there would be a great diminution of employment. I do not follow you how you think that would operate; I mean I do not follow the theoretical causes which you conceive would come into operation so that in the course of the next few months there would be an advantage?—I do not think I said there would be an advantage. What I said was, that in many trades I had reason to believe there would be a diminution of men employed in the next few months, which would be a disadvantage. I must repeat that I have not my wage statistics with me as to the past; and as to the future, I refer to my answer to the previous question.

4419. (*Mr. Houldsworth.*) Are you aware of any evidence that the lowering of wages is taking place at the present moment?—No, I do not think I have anything with me to show it.

4420. You do not know perhaps for instance that strikes which take place now are very much more easily settled than was the case in the inflated times?—I think there is no doubt that is so, and I think that is an indication of the men knowing very well that the trade is not profitable, and that wages are falling.

4421. Would the bimetallic law, do you think, if it were introduced as we are proposing, would it have the effect of steadying that fall of wages?—I think it would create a greater demand for labour in the manufacturing districts, and I think it would stay the fall in the agricultural districts.

4422. Then do you think it would raise wages?—No, I do not think it would at first.

4423. (*Sir T. Farrer.*) Are you speaking there of money wages or real wages, that is the quantity of things which the labourer wants which he can buy with his wages?—That is a different question altogether; we were speaking of money wages.

4424. (*Mr. Houldsworth.*) I presume you would hold that if the appreciation of gold had caused the fall in prices in commodities, and that as you told us the wage fund had not yet felt the effect of the appreciation, that when it did feel it then you would have the wage fund and price of commodities in the old relation that they occupied before both those changes took place?—I do not know that you quite understood the distinction I drew between two parts of the wage fund. I think that the wage fund has already, in the diminution of numbers of workmen, felt the effect, and that the amount of wages given to particular work perhaps in some cases has not, but that it is bound to be felt in time, and that if on the other hand the range of prices increased very much again, the number of workmen employed would increase very soon, and the amount given to each particular work would rise at a slower rate.

4425. Do you hold that the legislation in 1816 affected contracts that were made before that?—Certainly, an immense amount of ruin of all kinds arose from it, which was the subject of innumerable writings and pamphlets at the time.

4426. Then you hold another distinct effect was produced on contracts by the resolution of Germany in 1873?—Yes.

4427. And you hold that any new legislation would not produce any more effect on contracts than these previous Acts of legislation?—No, they would be of the same character.

4428. (*Sir John Lubbock.*) The effect of adopting the ratio of 15½ to 1 would be, would it not, to raise the rupee to about 1*s.* 11*d.*?—I presume so.

4429. Would you not in effect be enacting that every debtor who had made contracts with the rupee at the present price should have his debt raised about 20 per cent.?—Yes, just in the same way as in 1816 or of 1797, or on any other legislative changes of that kind which might occur, some people would have their debts increased to the extent of the alteration in the prices.

4430. But was there any legislation in 1816 or at any other time such as to make a difference in a few hours of 20 per cent. in the amount of the indebtedness?—I think the battle of Waterloo must have made a great deal more.

4431. But that was not a matter of legislation?—Well, it was not a matter of ratio, it was one of "ultima ratio."

4432. The silver debt of India amounts to one hundred millions sterling, would it not be rather a serious thing to have a legislative enactment that would raise the value of that debt to a hundred and twenty millions sterling?—The alterations made, not by ourselves, but by the German and French Governments, reduced the debt to that extent.

4433. But we are not responsible for the legislation of foreign governments?—I may say we are responsible to a certain extent. The whole of this monetary revolution springs from a monetary conference at Paris which had to do with coins in 1868, and the greatest possible encouragement was afterwards given by the English Chancellor of the Exchequer of the day to the idea that all nations had much better come to a gold standard, and that conference at Paris in 1869 came to the conclusion that a single gold standard should be adopted by all nations, the object being that they might have a similar coin. The German Government, when they had conquered France and taken all the gold out of the country, determined to act upon that solemn resolution adopted at the Paris conference. Therefore I venture to assert that there is some responsibility attaching to England; certainly attaching to English economists, and, in my opinion, to the advice of the English Chancellor of the Exchequer in 1869 in producing that resolution which reduces the rupee debt of India.

4434. At any rate you think it is so important to adopt the bimetallic theory that you would be prepared to face that?—Yes, I should be very glad to do it.

4435. Still you approve, do you not, of the present system of gold being used for the large payments, silver for the medium, and copper for the smaller payments of the country; you regard that as a convenient system, do you not?—Yes, I think so.

4436. And it is very important, is it not, that all these classes of coins should be easily obtainable?—Yes.

4437. At present, apart from the inconvenience of the light sovereigns, it is always easy to get either gold, silver, or copper coin, but in France under the old system you had a difficulty. There was an agio, sometimes on gold, sometimes on silver; and do you not think that is rather an inconvenient arrange-

ment?—No, I do not think there was any inconvenience about it practically; there was an inconvenience in carrying about barrowfuls of silver to pay your bills with, but that is now put an end to by the use of cheques and bank notes in fact.

4438. Under the bimetallic theory which you advocate you consider, do you not, that the moment either gold or silver fell in value as compared with the other the demand for it would increase, and *vice versâ*, so that there would always be a compensatory arrangement that would keep both metals in ratio?—Yes.

4439. You have expressed your concurrence in Mr. Gibb's opinion, that the relative change in the value of gold and silver is partly due to depreciation of silver and partly to the appreciation of gold?—If you mean the change in value of gold and silver told in each other, I agree with Mr. Gibbs that is partly due to one and partly to the other. If you mean the relations of the two metals to commodities, it appears that silver has scarcely altered while gold has risen 30 per cent., and therefore I should say that the fall in prices is the same as the appreciation in gold.

4440. We are to inquire whether the change in value is due to the depreciation of silver, the appreciation of gold, or to both, and Mr. Gibbs expressed his opinion very strongly that it was due to both causes; do I understand that you differ from him in that respect?—There is a depreciation of silver told in gold from causes connected with the former, I do not dispute that.

4441. You think in the main it is due to the appreciation of gold, and not to the depreciation of silver?—I think so.

4442. You know it has been argued by several authorities, and particularly by Mr. Childers of late, that the effect of war by diverting labour from production, is to raise prices; and *vice versâ*, that the tendency of peace is to produce a gradual fall of prices; do you think that the fall of prices of late is to any considerable extent due to the lengthened peace; have you considered that question?—Yes, I have studied that question, I think there is a great deal in it. I always believe that war has a very considerable effect on prices, therefore it is not a question of principle that I should dispute with Mr. Childers, I merely dispute the degree and the amount to which that has been the case.

4443. Then you consider that the present fall in prices is to an important extent, though not entirely, due to the lengthened peace?—I think it has something to do with it. It is important, I have never disputed that.

4444. Then I gather your opinion to be that the action of Germany and other countries which have adopted the gold standard has affected the relative values of gold and silver by increasing the demand for gold and decreasing that for silver?—Yes, for the purpose of coinage.

4445. And in your opinion the adoption of bimetallism would raise the value of silver by the opposite process?—Yes.

4446. But you will remember no doubt Mr. Seyd's table of the population using different currencies, 85,720,000 using gold, 139,000,000 using mixed gold and silver, and 841,000,000 using silver. Now to those 85,000,000 we have to add I think Germany 41,000,000, Holland 3,700,000, Norway and Sweden 6,000,000, who have taken to gold, so that we should have to transfer about 50,000,000 from the silver-using countries to the gold-using countries, but that would still leave a very large number using silver. I should like to ask if you have considered whether since those who have changed from silver to gold form so small a proportion of the total number using silver currency the alteration can be due so very much to that change?—I think the mere act of demonetization by Germany—they sold 28,000,000*l.* of silver, which is more than two years of the average production of the whole world, and they coined 87,000,000*l.* of gold, or three years' production of the whole world, those acts would, I think, produce that effect.

4447. I am simply asking your opinion. If the total population using silver is roughly 841,000,000, do you really think that 40,000,000 or 50,000,000 changing would make such a great effect?—Yes, I think it would.

4448. As I understand, you propose that not only England should enter into this, but India should also enter into the arrangement?—Certainly.

4449. Well, would not the effect be that 36,000,000 of people who now use gold would use gold and silver, and that 200,000,000 of people who now use silver would begin to use gold, so that in reality there would be a much larger number of people who now use silver taking to gold, than there would be of those who now use gold taking to silver?—My opinion of India is that they do not make those changes in their habits so quickly as one would suppose. I do not think my opinion is worth having upon it.

4450. Then you do not think the introduction of bimetallism into India would have any material effect?—I do not think so.

4451. In England, do you think that our having a bimetallic system here would cause us to use much more silver in the ordinary affairs of life?—No, I think we should do everything in cheques as we do now.

4452. Then it would not make much difference either in England or in India?—I do not think so.

4453. If this would make no difference either in England or India, what would be the difference?—We should hold silver in the Bank of England as against notes, and I suppose in Scotland too.

4454. Then the main difference in your opinion would be, as far as England is concerned, that the Bank of England would hold a certain amount of silver instead of a corresponding amount of gold?—Yes.

4455. Then I understood you to say that the adoption of this system would tend to raise prices 20 or 30 per cent. not at once, but gradually?—My opinion is that if it is true that it has been the cause of the fall in prices it is equally true that it would raise prices.

4456. But apart from any hypothesis, do you think it would raise prices?—I think it would, yes.

4457. But you would not by the process you suggest in any way increase the volume of the currency, would you? You have at the present moment certain countries which use gold and certain countries which use silver. You propose that instead of one half the countries, we will say, using gold, and the other half using silver, that all the countries should use both gold and silver. You would not therefore increase the volume of the currency?—The volume of the currency within the privileged legal tender area for that particular purpose would be increased.

4458. Suppose you have say 100,000,000 of people of whom 50,000,000 are now using gold, and another 50,000,000 using silver. You propose that the whole 100,000,000 should use both gold and silver, but you do not by that process increase the volume of the gold and silver or the currency; therefore I do not quite follow your argument why it should raise prices?—It has only reduced prices in gold-using countries, and I presume it would only raise them in those countries.

4459. Then you do not express the opinion to the Commission that the adoption of bimetallism would have any effect upon prices?—I think it would certainly. I did not say it would increase the volume of the currency all over the world; I said it would increase the amount of silver which would come within the privilege of being legal tender. I think it would increase the volume of currency in gold-using countries. I am of opinion that the existing state of things has been the cause of the general fall of prices, and if you restore the old state of things, that it would by parity of reasoning raise prices to the same extent.

4460. (*The Chairman.*) Why would it? Of course if a certain state of things produced a fall and you reverse it, that would produce a rise, but has it produced a fall, and why should it produce a rise?—Of course I believe it has produced a fall, and if

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it has produced a fall it is quite certain to produce a rise. I have never had this question put in this shape. I had only seen it in the shape in which I started, believing as I did that according to all the laws the state of things was bound to raise prices if it had reduced prices. All the statisticians in whom I put my faith said that was the case, that it had reduced prices. I said if that was the cause of the reduction of prices, it appeared to me that the restoration of the old state of things would cause them to rise. But now you put it in another shape, and my answer is that the fall has been in the gold-using countries, to whom the diminished production of gold is important, and where the increased demand has arisen. It is in evidence that the fall in prices in silver-using countries has been immaterial. The rise would consequently be in the gold-using countries, and not all over the world. The effect of silver coming into the circulation in countries now using gold would be precisely the same as a fresh batch of gold discoveries.

4461. (*Sir John Lubbock.*) I rather thought from the answer you gave me that you based your argument on the statement that that there had been an increase in the use of gold for currency purposes and a diminution of silver, that there had been no countries which had abandoned gold and taken silver, but that there had been several countries which had abandoned silver and taken to gold. I understand you to argue that this would produce a greater demand for gold, and consequently it had diminished gold prices. Then I was going to put it to you how you thought you would reverse that by proposing that an empire which consisted of 200,000,000 of people using silver and 36,000,000 using gold, should use both gold and silver. It seemed to me that you would be going still further in the same direction, because you are proposing that 200,000,000 of people that now use silver should use both gold and silver, and 36,000,000 of people who use gold should use gold and silver, though I admit that the 36,000,000 use more in proportion than the 200,000,000? —The proportion of the circulation to the population is a prevalent element in the discussion of the currency question in America. I have never myself considered it of importance. But the gist of your question appears to me to be that in establishing bimetallism and including India we should create a fresh demand for gold over that vast population. If a single gold standard were enacted in India the price of silver and of all commodities told in gold would fall enormously, and the divergence between the two metals increase. But under bimetallism I fail to see how the fresh demand for gold need arise. Mr. Clarmont Daniel would seem to assert it; but, in order to do so, he was obliged to attribute it to the insatiable desire for gold which exists in India. There is, it is true, an unaccountable movement of gold to India now, it is believed for hoarding. But it is not conceivable that the population of India would insist on having gold in order at once to pay it away. If a man has so many rupees to pay away for rent, wages, &c., it is not possible to imagine that he will buy his gold for 2*s.*, in order at once to pay it away for a debt of 1*s.* 6*d.*, and yet, if we are to accept Mr. Clarmont Daniel's doctrine, that is what would happen. To suppose that the operation would be otherwise would be to admit that the rupee would rise to, and remain at 2*s.*, and that bimetallism would be successful. I attribute the hoarding of gold in India to the fear that further tricks with silver may be played, and I believe that wth the double standard much of that hoarded gold may come into circulation. The fact is that with regard to India it is difficult to draw any conclusion, because everybody would have supposed that the effect of this currency revolution would have been to raise the rupee price in India, and it has not done so. I am much puzzled to account for the fact that it has not.

4462. If commodities generally have fallen 25 per cent. and silver has fallen 20 per cent. then you would not expect silver prices in India to have altered?—That is what has occurred, but I should not have expected it.

4463. And is not that the explanation of the fact that they have not so materially altered?—It may be, but still it has always astonished me that silver did not go more freely into India.

4464. You have not considered what the effect would be of introducing a gold currency into an immense population like that of India which at present has only a silver currency?—I have considered very often what would be the effect of making a single gold standard in India, and a gold currency there with that single standard. But if you ask me whether making India part of a general bimetallic system would entail the probability of their taking a good deal more gold, I repeat that I do not think it would.

4465. (*Mr. Barbour.*) I think you said in reply to Sir John Lubbock that if silver was raised 25 per cent. in value with reference to gold, that would increase the burden of the Indian debt by 25 per cent.?—The silver debt.

4466. Well now, if silver and gold were brought together in that way, would not the influence be exerted as much on the side of gold as silver, would not you bring down gold just as much as you brought up silver; you would increase the demand for silver by what you propose; you would reduce the demand for gold in exactly the same proportion in the two cases?—Yes.

4467. Therefore the increased demand for silver would bring up its value in commodities so much, the reduced demand for gold would bring down gold so much?—Yes.

4468. So that really the increase in the burden of the Indian debt looked at from a theoretical point of view would be only one half of the 25 per cent.?—Possibly.

4469. Has not India also got a large gold debt, and would not the burden of that debt, still treating the matter as one of pure theory, be reduced in the same proportion in which the burden of the silver debt was increased?—Yes.

4470. England has also a large gold debt?—Yes, and many corporations and individuals.

4471. And would not the burden of that debt on the English people be reduced in the same proportion?—Yes.

4472 And when all these losses and gains had been made in connexion with the gold and silver debts, should we not have merely got back to the conditions which prevailed at the time when the bulk of these debts was contracted?—I think so.

4473. (*The Chairman.*) I do not quite understand your answer to the question that the increased demand for the silver would be exactly equal to the decrease of the demand for gold. I understand your view to be in relation to India, as everywhere else, that there would be increased demand for silver and decreased demand for gold, and that the one would balance the other?—Given that the demand for circulation was the same, that is what I presume.

4474. If the two things are equal, if owing to your monetizing silver in certain countries there is an increased demand for silver and there is an exactly corresponding decreased demand for gold, would you not have the volume of the currency much as it was before?—If a rise in prices created a fresh demand for currency I do not think it would.

4475. Then you do not think that the two would necessarily correspond, the decreased demand for gold and the increased demand for silver?—When I gave the answers to which you allude I was under the impression that Mr. Barbour was speaking of India alone, he was speaking of the Indian debt.

4476. I should like to ask you with reference to the fall of prices a question or two. You are aware that *The Economist* index numbers which have been put forward as showing the fall of prices have been somewhat impeached?—I understand they have.

4477. You are aware that they certainly show during some years a very materially different result

from that which is obtained by taking a few other commodities and having other index numbers?—I am aware that it has been so contended, because I began by saying that I have taken *The Economist* index numbers and Mr. Giffen's figures as correct.

4478. You have not investigated that point?—I am not a statistician. It requires to be a trained statistician to understand them at all, therefore I start from the point that those numbers are correct.

4479. The monetary change took place in the year 1873?—Yes.

4480. Now would you not have expected theoretically, if these great results have flowed from that change, to have found decided symptoms of it in the five years following 1873 as compared with the five years which preceded 1873?—Yes.

4481. I find that if you take the figures of *The Economist* in the four years immediately following 1873, the total index number was higher in each one of these years than it was in the four years preceding 1873, and that it is not till the fifth year following 1873 that you get anything lower than the preceding years. How do you account for that?—I do not think you would get anything reliable out of me about it. I am quite unable to discuss the reliability of those index numbers; but I think that the prices in 1872 and 1873 reached in a great many of the principal articles almost to what was called the famine point, and that the effect of this currency revolution would naturally not occur at once in all these articles. It occurred almost at once in silver, but I think it could be shown from Mr. Giffen that in order to arrive at any proper conclusion on that subject you must take a much longer period than one or two years. I think he said the 10 previous years is the proper period upon which to base the calculations. With reference, however, to Dr. Soetbeer's criticism on *The Economist's* index numbers, I should wish to remind the Commission that though he finds fault with the method pursued therein, his final conclusion is not so very different. Dr. Soetbeer is so fair a man, not only in this special particular, but in others in which I have known him to be consulted, that I cannot help quoting what he says as to index numbers based upon different calculations to those of the London *Economist*: "If we compare the above surveys with one another, it must be allowed that the total "index numbers calculated upon different methods "do not show any such wide discrepancies as might "have been expected. The extraordinary lowering "of the level of prices in the last decade is shown "equally by them all. Still, I am of opinion that my "criticism of the method is not invalidated, and that "even the attempt by making full allowance for the "relative value of the articles to win confidence in "the accuracy of the index number leaves important "objections to be met."

4482. Have you considered at all the question how this monetary change affected prices, in what way it touched them? You would admit, I suppose, that it does not enter into the daily transactions which go to fix the price of any commodity on any given day?—I admit that the daily transactions do not show the fluctuations of wholesale prices, but I think daily transactions are affected by the plenty or scarcity of the precious metals because those transactions are made in coin. In talking of prices I follow Mr. Mill's doctrine that it is impossible to generalise except in wholesale prices of commodities in general use as settled by competition. Something must affect prices. If it is not the demand and supply of the precious metals, it can only be the supply and demand of commodities; and when fluctuations occur in the prices of commodities arising from *their* supply and demand, it is probable that they will not all occur at the same moment. That is to say, that a glut or deficiency of tobacco will not occur the same year it occurs in wheat, and so on. If then it is observed that tobacco is going up and wheat going down, no one would attribute these facts to the precious metals. But if, as I now believe to be the case, the general range of commodities in general use, and open to competition, have sustained a great fall, and it cannot be asserted that there is any cause special to each of those commodities, then I can only attribute that fall to the monetary changes. If it be true that the precious metals, like other commodities, are liable to rise and fall at all, that rise and fall can only be shown by a general rise and fall of other commodities reckoned in them. To suppose otherwise is either to assert that while supply and demand affect all other commodities, they do not affect the precious metals, or that there is some other measure of a rise and fall in the precious metals than the general fall and rise of commodities. Now let us apply another test, if it be true that a general fall in prices has taken place and dates from 1873 or thereabouts, we might expect to find that the cause of that fall would also date from the same year. What are the other causes assigned? Some say banking expedients or economies. I have already endeavoured to show that these would account for a rise in prices, but could only neutralise a fall. But even supposing they could cause a fall they did not begin in 1873. Other persons point to facilities of communication. There has been no particular increase dating from 1873. The opening of the Suez Canal is the only change of that kind in the decade before 1873. The construction of ocean steamers and railways has been progressing steadily and uninterruptedly since 1845–50. There remains then but one other cause, namely, that suggested by Mr. Childers, the long peace between the greater producing and manufacturing countries. I have already admitted that this cause has had something to do with the fall. Prices are, however, still the record of the relations between commodities and the standard in which they are reckoned, namely, one or other of the precious metals. So much of the fall of prices as is due to increased production or peace must be in the long run an universal benefit. So much as is due to the arbitrary interference of German and French legislation founded on English economical teaching is, to my mind, disastrous, and calls for the application of the remedial measures which we suggest.

The witness withdrew.

Adjourned till Monday.

Nineteenth Day.

Monday, 9th May 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. HENRY CHAPLIN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, BART, M.P.

MR. GEO. H. MURRAY, *Secretary*.

Mr. H. H. Gibbs.

9 May 1887.

Mr. HENRY HUCKS GIBBS recalled and examined.

4483. (*Sir T. Farrer.*) Mr. Barbour asked you a good many questions concerning exchange, illustrating the difficulties which arise from two varying currencies, and those questions bore particularly on the trade with India?—Yes.

4484. Are not all these difficulties as great or greater in the case of exchange between two countries one of which uses depreciated paper?—Yes. I will not venture to make it an exact comparison, because, as I have said before, I am not at all familiar with the trade with India, but my illustration of the whole matter has been derived from a paper-using country, Chili.

4485. And the number of such countries is large, and is likely to be very large is it not?—I will not prophesy. But it is now large.

4486. Well, one difficulty which Mr. Barbour mentioned was the difficulty of procuring the proper metal for remittance from one country to another where the metals and the currency were different in different countries?—Yes.

4487. That difficulty would only exist, would it, when the metal which is needed for remittance, that is the metal forming the currency of the country to which the remittance has to be made, is not to be found?—It would only exist for instance when you want to remit gold to a gold-using country, and gold was not to be found in sufficient quantity to use it as remittance freely.

4488. As regards India, silver can always or almost always be found or procured in London for remittance to India, can it not?—I cannot answer that question. I rather think I have heard of times when silver was not easy to procure; but ultimately it can be procured. With delay of course it could be procured.

4489. London is the great silver market of the world, is it not?—Yes. As to silver being procured, I remember at one time when there was a great demand for silver for the making of railways in India, silver had to be procured at very considerable difficulty. People had to send to France to get what silver could be gotten there, and had to collect five-franc pieces, suffering the loss that might occur by waste of the metal and the brokerage for collection, or whatever other expenses there might be.

4490. That was a case of extraordinary demand?—Yes, of extraordinary demand.

4491. Again, if gold is not remitted from India to England it is not for want of gold, but because there is a constant demand in India for the precious metals; is it not?—I do not think that is quite a sufficient statement. It is not only that there is a demand in India for the precious metals, but that the balance of indebtedness runs practically the other way, that is to say, the balance of indebtedness runs from India to England, not the balance of trade, as regards commodities between the two countries, but taking into account the debt due by India the balance is the other way, and it would be unlikely that gold or silver should be sent hither.

4492. But the flow of specie is from England to India, is it not?—Yes, the flow of specie is from England to India.

4493. If gold is not remitted from India to England, it is not for want of gold, but because there is a constant demand in India for the precious metals?—What I meant to say was that it is not a question of the demand for precious metals that regulates the thing, it is a question of how a debtor is to pay his creditor. If India is the debtor it has got to pay in what it can; if it has got gold to remit and could advantageously remit gold, it would remit gold.

4494. But as a matter of fact the precious metals flow from England to India do they not?—Yes, I think they do.

4495. The reason for that is that there is a greater demand for these metals in India, they are sent there because it is profitable to send them?—I am not quite sure what you mean by a demand for them there. There is a demand, but there is not a demand for them, I take it, except for the purpose of hoarding, in which I include ornament, as there is a demand for other commodities. Silver is sent, not because there is a love for silver, but because silver is Indian money, and it is sometimes better to send money than bills.

4496. But what I wanted to get at is whether there is any real practical inconvenience in India not having a gold currency out of which to make remittance to England?—Certainly there is, because the regulation of the balance of indebtedness would be obviously much easier if the two countries were on the same basis, whatever it were.

4497. I am only speaking now of the actual remittance of the precious metals. Do you suppose that if India had a gold currency we should have gold remitted from India to England?—Surely we should, how else could they discharge the balance of their debt.

4498. How do they discharge it now?—They discharge it now in this way, that they in effect sell their silver at a disadvantage, that is to say, that there are India Council drafts which bring the money to this side.

4499. And why do they not buy gold and send it; there is plenty of gold in India?—The people of India pay their taxes in silver, which is their legal tender. The gold mohur is worth, say 20 rupees, and, therefore, no man will pay a gold mohur to discharge a debt of 15 rupees. The Government receives the taxes in silver, and has to pay 15,000,000*l.* here in gold. They might, as you say, buy gold mohurs or ingots (as they might buy any other commodity) and remit

them. They do not do so, because it costs them less, and is more convenient, to buy the gold here by means of Council drafts. If it were not for the 15,000,000*l.*, there would be no question of making remittances of treasure from India, because the balance of commercial indebtedness would be the other way.

4500. And why does it cost them less?—It costs them less because there is always a necessity for commercial remittance to India, and so long as balances can be settled by bill the expense of specie remittance is saved.

4501. It is because people prize gold in India, is it not?—I do not know; they hoard silver as well as gold in India.

4502. And is not that one reason why silver is always going to India from England?—As I said before, there is a demand for hoarding and for ornament, as well as for money, which constitutes a kind of demand, no doubt.

4503. Precisely, and that is the reason why the precious metals flow to India and not back from India, is it not?—

4504. (*Mr. Birch.*) It is the balance of trade that takes it?—That is what it is; the balance of trade.

4505. (*Sir T. Farrer.*) But this is part of the balance of trade?—Of course it is. All remittances from one country to another form part of the balance of trade or indebtedness. The only difference between exports of specie to France and those to India is, that those to France are merely payments, while a portion of those to India are for hoarding or ornament.

4506. (*Mr. Barbour.*) Have you ever heard of gold being exported from India to this country?—I do not know.

4507. Have you ever heard of silver being exported from India to this country?—Well in 1883–84 there were 9,815,000 rupees exported from India, in 1884–85, 18,873,000; and in 1885–86, 10,878,000, and so on. I do not think any came to this country. In one week of this year for instance 200,000 rupees, chiefly in coin, went to Persia, Aden, Arabia, Kutch and Guzerat, Kurrachee, British Concan and Marmagoa. Marseilles took about 7,000 rupees, probably old French coin. Ceylon also frequently takes some. The amount of Indian exports of merchandise, 1883–86, was 2,571,295,698 rupees; imports 1,576,608,284. Treasure sent thither 422,238,919, and Council bills 523,500,000, producing 41,846,000*l.*; average exchange about 1*s.* 7½*d.*

4508. (*Mr. Fremantle.*) In what shape was the specie exported from India?—I cannot certainly say in what shape, whether gold or silver coin, or bullion.

4509. (*Mr. Birch.*) They had to pay their indebtedness. If they owed any money to this country they had to pay it. They paid it with gold, and if they could not get gold they sent silver. In exactly the same way if we owe to India we have to send silver, or gold if they prefer it. It is the balance of indebtedness which is thus settled?—Certainly; that is what I tried to say in my first answer.

4510. (*Sir T. Farrer.*) What I want to know is, why having both gold and silver they do not send gold and silver, or very rarely?—I may say, practically they do pay with silver; that is to say, that when the Council has got a certain number of silver rupees at its command, what it does is to draw for them. That is what drafts are, what bills of exchange are. They are movements of metal from one country to another.

4511. Gold and silver are only sent to pay debts, because they are the easiest and most profitable mode of paying debt. Is that not so?—I do not think your word profitable is good. They are only in a small degree an article of merchandise. For your words I should substitute "*when* they are the easiest and *least expensive* mode . ." I do not think that you can come to that point exactly between two countries, that one country can say to the other:—"I owe you so many "thousand pounds, I pay it in gold or silver, because "it is the most convenient to me." What happens is, that the country goes on with its merchandise, (and that in very large quantities from India,) and that the exchange, as I have said before, is the index of how the balance is going; gold is sent, or silver is sent when it is convenient to send silver, but they send that which is ready to their hand.

4512. That is, which is the cheapest for them to send?—The best for them to send; not always the cheapest of necessity. You look upon it as if they turned over in their minds, "How am I best to pay that debt?" It is not so.

4513. If a man has got to pay for a cargo in Calcutta, he sends over a bill, or he sends silver, according as he can get the one or the other cheapest, does he not?—Or he sends another cargo of goods. If the rate of exchange is more onerous to him than would be the purchase and transmission of silver, he sends the specie. The rate can never rise beyond the specie point, but where there is unity of money between two countries there is no question of purchase, and its variable cost; it is the course of commerce which leads him to send that which is best for him to send.

4514. That which he makes most by or least loss by?—It may be so, but he may have to send goods; he may have the stocks which he wants to get rid of. It always comes to that. He sends that which suits him best.

4515. If he happens to find that he can do it cheapest by sending silver he sends silver?—Yes, he would certainly if he could get it. He would have to buy it, as he would any other commodity. The difference is that silver is money in India.

4516. (*Mr. Barbour.*) He does what is cheapest for him under the circumstances that exist at the time, but it does not follow that under different conditions there might not be some other course which would be still better for him to adopt?—No doubt.

4517. (*Sir T. Farrer.*) The principal evil of which we have heard, arising from the fluctuations of exchange, is its effect on producers in the two countries, giving as is alleged a bounty to the one or imposing a burden on the other?—Yes; that is one of the principal evils. Another is the additional uncertainty imposed on dealings between gold and silver using countries.

4518. On the assumption that gold has appreciated, this bounty or burden consists in the fact that the Indian producers' permanent expenses have remained the same whilst the real burden of the expenses of the English producer have increased?—The English producer's nominal wages remained the same, but the gold having appreciated, his real wages have increased. As regards the foreign producer what I have explained, I think clearly, is not that his wages remained the same; they remained the same in nominal amount, that is, in rupees or dollars; but as counted in sterling they are halved or diminished by a large percentage. They are diminished, that is the real point; we are speaking of commodities produced there and imported hither. The advantage that the producer gets there is that he spends less, counted in English money in wages in the country where he is, in the production of wheat, &c. to be sold here.

4519. He spends the same quantity of Indian silver?—The same quantity of Indian silver, but a less quantity of English money.

4520. And that silver for the present, according to the best evidence we have, purchases as much as it did before?—Yes.

4521. On the contrary, the English producer pays the same gold rent and the same gold wages that he did before?—Yes, the same gold rent certainly.

4522. And for a time the same gold wages?—And for a time the same gold wages.

4523. And there is his loss as compared with the Indian producer?—Yes, I am not quite sure whether that bounds his loss.

4524. The gold price that he gets is less, but rent and for a time wages in gold remain the same as before?—That is quite true, but I am not quite sure that that bounds his loss.

4525. I do not want you to say that that bounds his loss, but that is a part of his loss?—Yes.

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4526. The change you propose would do away with this so-called bounty, and its immediate effect would therefore be to diminish the advantage which the owner of rent and the wage earner now get from the present state of things?—The immediate effect would be to do away with the bounty; the effect on the rent-owner and wage-earner is wholly different and very much smaller.

4527. You wish to do away with this difference?—You have just said that the hypothesis is that it is a disadvantage to the owner in England.

4528. That is an advantage to the owner of rent and to the receiver of wages, and a disadvantage to the payer of rent and of wages?—So far as gold is appreciated, it must be an advantage to the rent-owner, and for a time to the wage-earner.

4529. I am speaking on that assumption?—So far, I say; but I would say more than that, because gold may be appreciated in respect of commodities generally, yet the rent-owner and the owner of the 3*l.* that he gets from Consols may be able to buy very little more of any of the necessaries of life with his 3*l.* for the very reason that you spoke of as to wages, which also affects necessaries of life; they are the last to fall; the consol-owner gets his 3*l.*, and the wage-earner gets his yet undiminished wage, but it is a doubtful assumption to say that he can buy very much more with it.

4530. Quite so, and meanwhile the wage-earner temporarily benefits because his wages remain the same while prices fall?—No; there again, the necessaries of life are the last to fall, they fall with the wages. I think that the producer is the first to feel a fall, the wholesale dealer the next, the retail dealer the next, and therefore the necessaries of life do not very much change; they do change, no doubt. In bread, for instance, the change there comes more rapidly than it does in other commodities, in clothes and so forth. Why it does I do not know, but I think it does so. I think the evidence is that it does.

4531. Then do you think that retail prices would be slower in falling than wages?—I think that retail prices and wages fall about in the same way. Retail articles are substances, are things; the labour that the wage-earner has to dispose of is not so tangible a thing as they are, and cannot be appraised quite in the same way. It does not so soon occur to the labourer to say, "Everybody is getting more for their commodity, I also must get more for my commodity," or must take, if they do, less, as the case may be. Mill explains the whole case and its causes, in B. III., c. 1., s. 5, "Before "commencing the inquiry into the laws of value and "price, I have one further observation to make. I "must give warning, once for all, that the cases I con-"template are those in which values and prices are de-"termined by competition alone. In so far only as they "are thus determined can they be reduced to any as-"signable law. The buyers must be supposed as "studious to buy cheap as the sellers to sell dear. "The values and prices, therefore, to which our "conclusions apply, are mercantile values and prices; "such prices as are quoted in price currents; prices "in the wholesale markets, in which the buyers take "pains to know, and generally do know, the lowest "price at which an article of given quality can be "obtained, and in which, therefore, the axiom is true "that there cannot be for the same article of the "same quality two prices in the same market. Our "propositions will be true in a much more qualified "sense, of retail prices; the prices paid in shops for "articles of personal consumption. For such things "there are often, not merely two, but many prices "in different shops, or even in the same shop; habit "and accident having as much to do in the matter "as general causes. Purchases for private use, even "by people in business, are not always made on "business principles; the feelings which come into "play in the operation of getting and in that of "spending their income are often extremely different. "Either from indolence or insouciance, or because "people think it fine to pay and ask no questions, "three-fourths of those who can afford it give much "higher prices than necessary for the things they "consume, while the poor often do the same from "ignorance and defect of judgment, want of time "for searching and making inquiry, and not un-"frequently from coercion, open or disguised. For "these reasons retail prices do not follow with all "the regularity that might be expected, the action of "the causes which determine wholesale prices. The "influence of those causes is ultimately felt in the "retail markets, and is the real source of such "variations of retail prices as are of a general and "permanent character. But there is no regular or "exact correspondence. Shoes of equally good quality "are sold in different shops at prices which differ "considerably; and the price of leather may fall "without causing the richer class of buyers to pay "less for shoes. Nevertheless, shoes do sometimes "fall in price, and when they do the cause is always "some such general circumstance; and when leather "is cheapened, even if no difference shows itself in "shops frequented by rich people, the artisan and "the labourer generally get their shoes cheaper, and "there is a visible diminution in the contract prices "at which shoes are delivered for the supply of a "workhouse or of a regiment. In all reasoning about "prices the proviso must be understood, supposing "all parties to take care of their own interest."

4532. Then you think that the whole benefit of this goes to the retail dealer?—For a time the retail dealer benefits. It should be clearly understood what the benefit is. It is this. He buys chiefly in the wholesale market, but the fall of prices does not at once reach him, and he sells at his former prices. I think we came to the conclusion in the Commission on the Depression of Trade that that accounted in great measure for Schedule D not having fallen off, that the retail dealer was making very considerable profits and doing very well, whereas the wholesale dealer was not.

4533. But do you not think that in such an article as bread or sugar, the wholesale price finds its way into the retail price very quickly?—No, I do not think it does very quickly, neither can it, because a drop of such and such an amount in the wholesale price cannot be so easily divisible into the small portions that your working man asks for. If he wants a couple of ounces of sugar he cannot get a corresponding reduction of price.

4534. Then you think that the whole benefit of this difference goes to the retail dealer, and that the effect of the change that you will make will be simply to take so much out of the pocket of the retail dealer and put it into the pocket of the producer?—I cannot say that, because he also will suffer. I only say it is a question of time. The wholesale dealer and the producer feel first that which the retail dealer feels later on. If by natural causes or any other the state of things is reversed, and prices rise, the retail dealer will be the last to feel the benefit of the reverse. It comes to the same thing to both retail and wholesale dealer; it is a question of time. It is not one man against another, but one time against another.

4535. The whole thing is a question of time, but I am talking of the interval between the period at which the fall begins and the period at which things are adjusted, and the question is which class gains and which class loses during that interval of time?—There is no question as it seems to me of an interval of time during which one class loses and another gains; at the beginning the retail dealer is gaining as compared to his neighbours; the time will come when the thing will alter, when the pendulum will swing the other way, then his prices having fallen will for a time remain low, and those of the greater dealers will rise. It is a question of time, as I said before, not a question of man against man.

4536. Then you think that during this interval the whole difference lies between the wholesale producer and the retailer, and that the wage earner is neither the better nor the worse, in fact that he is

not affected at all?—No; I do not say that at all. I say the effect, whatever it is, reaches the wage earner, but reaches him last in point of time, and the effect of a subsequent rise in prices will also reach him last in point of time, consequently he will be suffering while others are gaining, he is now gaining while others are suffering.

4537. But he is gaining? I will explain more fully what I mean. We have heard much of the effect of exchange; we are told that a bounty is given to the Indian producer; and that that bounty consists in this, that the relation of silver to commodities is much the same in India as it ever was, that the producer in India pays the same wages that he did and the wage earner in India gets the same quantity of commodities for his wages; whilst on the contrary in England the producer gets a smaller gold return than he did for his products whilst his expenses, which consist partly of rent and partly of wages and possibly of other things, remain for a time the same as they did before?—It is better not to use the ambiguous term "effect of exchange." It is the "effect of the depreciation of silver in terms of gold" that is meant. Otherwise I agree that the facts are as you state them.

4538. Consequently the wage earner will continue to receive the same nominal wages for a time till things are adjusted?—"Has continued" I should say rather than "will continue." From the beginning of the alteration, whatever it is, the wage earner, as I said, I cannot put it in simpler language, is the last to feel any change.

4539. The moment that the alteration has reached wages the disadvantage to the English producer will cease?—Certainly if it is sufficient, that disadvantage will cease; there are other disadvantages.

4540. (*Mr. Houldsworth.*) Is there not an immediate effect produced by the bonus enabling the creditor to send into this country a commodity and to compete at once?—That is the other advantage that I spoke of.

4541. To compete at once with the production of those labourers that are spoken of?—Certainly.

4542. Although if you do not take that into account wages may not fall and the labourer may be equally well off, but he is affected at once by the importation of the cheaper production which at once interferes with his own production, interferes with him at once in his employment?—That is the other disadvantage of which I spoke.

4543. (*Sir T. Farrer.*) The reason why the Indian product is cheaper is that the expenses have remained the same, and it would not have been cheaper than the English product if the Englishman's wages had fallen at the same time as prices. Is not that the real reason why the Indian product is cheaper?—The Indian product comes cheaper to England because the producer's initial expenses have remained nominally the same, but, being less in English money, they take less out of the gross proceeds; and this advantage may last till a fall of English prices lessens the gross proceeds. If wages fell here proportionately to the fall in prices, the English producers' position might be betttered; but there is no analogy between the fall in sterling wages of the Indian producer and the fall of wages here. The former is definite and immediate, the latter distant and indefinite. I rather wanted to answer another thing which grows out of your question, because it seemed to me to be a misapprehension of something that I had said; you spoke, I think, of the advantage to India. I have never said anything about any advantage to the country, what I have spoken of was the stimulus to production and the advantage to particular persons, and I instanced that which alone I knew, the case of Chili, where I myself was a producer. I am far from saying that it is for the advantage of India, far from saying that it is for the advantage of Chili.

4544. That is another question altogether, the advantage to the country as a whole; I am speaking now only of the Indian producer in competition with the English producer?—Then we will keep to that point; but I should like to have that other question brought out, because it is a very important one; one of the Commissioners asked me that question about the advantage to the country, or rather intimated that he thought it would be a bad thing that a change in the status of silver should be made, because we should be arbitrarily taking away from India an advantage that it has; and I should like someone to ask me that question that I may say what I have to say about it.

4545. Let us confine ourselves at present to the question of wages. The advantage to the Indian producer over the English producer is, that he has to pay only the same wages as before, while the Englishman has to pay the same nominal wages, but larger real wages?—I doubt if that quite meets the case, because that would seem to apply generally to the Indian producer and to the English producer compared one with the other, whereas it is the Indian producer of produce for export to England, that is the only thing in question: to gold-using countries I would say; that is the thing it means, that is the only thing in question. It is, as I said before, that he pays a less sterling value in wages.

4546. But that is exactly the point that I want to get at. It does not matter whether it is the producer of cotton or the producer of wheat, the allegation is that the Indian producer gets an advantage because his wages remain the same while at the same time the English wages and rents are high?—That is not my allegation.

4547. Well that is what has been told us over and over again?—I can only answer for what I said myself. That is not my allegation. My allegation is, judging by my experience of production in Chili, that inasmuch as the wages and other items of initial cost paid by the Indian producer remain the same while the produce when remitted hither sells for gold which buys more rupees that it did formerly, his production is stimulated and his produce competes with ours.

4548. (*The Chairman.*) You mean that selling at a lower price he still can make some profit?—He still can make some profit, even selling at a lower sterling price. It has of course to be considered how much lower the price can be before his profit is destroyed, and ultimately it does get destroyed. That is why I have always said that it is only a temporary advantage.

4549. (*Mr. Birch.*) Will you just explain that "ultimately does get destroyed," will you explain what you mean by that?—I mean that, by competition of foreign produce and also by the scarcity of our measure of value, the price in sterling of the Indian produce falls to such a point that the exporter from India gets no greater advantage than he did before the fall of silver; that is to say, that the reduced gold price will buy no more rupees than the higher price did before the demonetisation of silver. Besides this, the initial cost in rupees tends, though slowly, to rise.

4550. But Chili is a paper-using country?—Certainly.

4551. I think it is necessary to clear that up, because provided that silver went up in India, then they would not get the advantage which Mr. Chaplin was referring to the other day. Supposing silver went up then that advantage would cease?—Certainly.

4552. In the same way with Chili. Supposing it was rehabilitated in regard to its money position, then the money there would be more valuable, and therefore what went in wages would be more valuable, but the wages would not go up?—Yes, I said there were two causes which would destroy the temporary profit, one the rise of wages there to meet the depreciated character of the silver, that is, the silver would be itself depreciated, and the other the appreciation of gold here.

4553. But in the last question you brought in the element of time, and you said, supposing after a time it would be so, is it not the fact that the time would

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only have an influence provided that the silver went up there?—What I said about time was this. The profit to the Indian producer could be only temporary, and the resulting stimulus could last but for a short time, because wages would rise in India on the one hand, and prices would fall here on the other.

4554. (*Sir T. Farrer.*) I think in one of your answers to Mr. Chaplin you said that the owners of all commodities would gain by the adoption of the bimetallic system. Sellers of one commodity are buyers of another are they not?—In other words the probability is that prices would tend somewhat to rise. They would be guarded against continued contraction of the currency, and so far as the adoption of bimetallism would, though in no great degree, expand the currency, they would rise.

4555. The rise of general prices would so far as purchase and sale are concerned injure buyers as much as it would benefit sellers?—Of course they go together, but they do not go together in time, that is the thing.

4556. We are all buyers, and we are all sellers?—Yes, certainly; we are all debtors and we are all creditors.

4557. Therefore it may signify whether prices are rising or falling, but it does not signify to the community whether prices are high or low?—Certainly not.

4558. And the distinction is not between the owners of commodities and the owners of gold, but between creditors and debtors, is it not?—I admitted that it does not signify the least in the world—no, I am not sure that I can say that, because if prices remain at a very low point it may be destructive of certain industries.

4559. Not if all prices are equally or proportionately low?—Well, but all prices never are. That is only theoretical. Theoretically you are perfectly right; practically it does not come to be so.

4560. Practically they do not go together?—They do not go together.

4561. You think that one of the advantages of bimetallism is that it would tend to raise prices, and that that would give a stimulus to production. Do you think that it signifies whether you gave 2*l.* for a thing or 1*l.* for a thing, provided everything else rises or falls in the same proportion?—That is the old story of halving the money in one's pocket.

4562. But I do not think you mean to distinguish between the owners of commodities and the owners of gold?—Not at all.

4563. Because that was rather the effect of the question?—But let me *in limine* protest against your last statement of what I desire. You said that the thing to be desired by bimetallism in my view was that we should have a continuous rise of prices. I have all along said that a tendency to a rise rather than to a fall in price is a subsidiary result, a probable subsidiary result of that which I desire.

4564. I was rather referring to your answers to Mr. Chaplin than to your general evidence. He asked you whether you did not think it would be an advantage to the owners of commodities, and you said you thought that on the whole it would stimulate production and trade?—Yes.

4565. Over and above the question of a stable ratio?—Yes.

4566. (*The Chairman.*) Would not there be a danger from that very thing; might not one effect of rising prices be, and has it not been, so to stimulate people going into trade as to bring down these prices very rapidly?—Certainly, over speculation, over industry if one may use the phrase, may be induced.

4567. (*Sir T. Farrer.*) You will bear me out in this, will you not, that if you look back to our old political economists, Adam Smith and Ricardo, you will find that the great thing they were afraid of was depreciation of the standard and a rise of prices in consequence of depreciation?—Yes, since their time too, and within our own memory that apprehension has been entertained.

4568. (*Mr. Chaplin.*) And those views were of course expressed, were they not, long before the present state of things existed?—Oh yes; it is Adam Smith and Ricardo.

4569. (*Mr. Barbour.*) Do you see any danger of the depreciation of the standard at present?—I do not.

4570. (*Mr. Birch.*) But I think Ricardo rather referred to the paper currency?—Yes.

4571. And they had in view always the rise and fall of the circulation of paper had they not?—I think they had, but still what impressed them was the fear of over much depreciation, whether it is in one sort or another.

4572. (*Sir T. Farrer.*) Well then it is not the owners of commodities *versus* the owners of gold that we have to consider, it is debtor *versus* creditor. If bimetallism were to raise prices it would or it might slightly benefit debtors at the expense of creditors, would it not?—I think it might, just as creditors have been hitherto benefited, or since 1873 benefited, at the expense of debtors. Just so far.

4573. And you would alter this by recurring to what was the state of things before 1873?—I should be most pleased to do that, but we cannot be quite sure that it is attainable. We can without the least difficulty recur to the state of things before 1816 if England is willing, but to return to that before 1873 is quite another thing.

4574. But you would bring back the silver and gold to a ratio of 15½ to 1?—I think that would be the best. I have given reasons why I think that.

4575. That ratio was maintained pretty well up to 1873, was it not?—It was.

4576. Now to return for a moment to the *modus operandi* of the bimetallic ratio, your view that when a bimetallic country is denuded of one metal it will still keep the ratio steady, is not necessary to the bimetallic theory?—That rather depends on what you mean by "keeping the ratio steady," and what by "the bimetallic theory." The ratio is fixed by law. Everyone can pay his debts in either metal coined thereat. Nothing can make it unsteady but the repeal of the law. If you mean "keeps the price of gold and silver steady in silver and gold using countries respectively," then I answer that my view as to that is not necessary to the bimetallic theory, by which I understand the theory that it is possible and desirable so to link gold and silver together by law that both shall play their part as heretofore in the money work of the world.

4577. The argument of bimetallists generally is, that if the chief commercial nations join, it is tolerably certain that all of them will not be denuded of one of the metals?—Yes, I may say that none of them would be denuded of either of the metals.

4578. (*Mr. Courtney.*) Do you lay that down absolutely whatever the ratio?—Certainly, if they all agree on one ratio.

4579. And whatever that ratio?—Whatever that ratio, if they all agree.

4580. So that if the ratio were let down to two to one?—Yes, certainly, if all agreed.

4581. There would be no denudation?—I have always asked the question, whither would the one metal go, and nobody has ventured to answer it.

4582. Would there in that case be continued production of the other metal?—That is quite another thing. One of the metals would very probably tend to assimilate the production to the ratio. That is possible. I will not answer for what might be because I am not a miner.

4583. But you know the motive of miners?—And I know that for that reason it is difficult to predict what will happen. I hardly know that any miner will ever stop working, while he has or can borrow capital to work with.

4584. Theoretically at all events it might have considerable effect upon the production?—In such a case as you mention I think it might. The measure of

value would be enormously increased and the price of labour would at last rise in proportion.

4585. And it might also have an effect in getting that one metal discharged from its use as coin and converted simply into use for ornament?—I doubt about ornament considerably. If you mean the dearer metal, the one least produced, I do not believe it.

4586. You do not think that if such a ratio were established gold might almost cease to be produced. There would then be a consequent withdrawal of gold from currency in order to make up for that?—Gold would rather be brought out from hoards or withdrawn from the arts before it would be withdrawn from currency. There are at least 800,000,000*l.* sterling of gold in existence as money, and it is computed that there are some 400,000,000*l.* of gold besides. There is also a nearly equal quantity of silver (reckoning at 15½ to 1). It has taken 1,000 or 2,000 years to bring the stocks to these amounts; I do not think we need trouble ourselves with what will happen afterwards to either metal.

4587. (*Sir T. Farrer.*) But you admit that much inconvenience might be suffered by a single nation who should adopt the bimetallic standard, and that it was in fact suffered by France?—Whatever inconvenience there may have been France suffered it; but I have never seen an intelligible account of the inconvenience. M. Pierson, late Professor of Political Economy, and now Governor of the Bank of the Netherlands, puts succinctly what can be said as to the change of metals in France. He writes on pp. 67–9 of his book on Political Economy: "Only in the first quarter of this "century was there a mixed circulation. In the "second, gold was driven out by silver, in the third, "silver was driven out by gold. In the fourth, after "the new monetary measure of Germany, silver came "back. Is it no evil for a country when its "monetary system is wholly revolutionised every "twenty or twenty-five years?" He answers, and I answer, that whatever might be the inconvenience, in a small and single state like Holland no practical evil would result to a group of states such as he had mentioned—Holland, England, Germany, the Latin Union, and the United States. Any depreciation of either metal and consequent demand for it for coinage would speedily cause it to rise again to the level. "There are," he says, "210,000,000 men in those countries using some 670,000,000*l.* sterling of gold. How long, think you, would the relative value of the two metals show a depreciation of silver if they should really set to work to part with this mass of gold and get silver for it?"

4588. Will you tell the Commission how you understand the Gresham law to operate in practice?—If two kinds of money circulate in a country the cheapest will drive out the dearest. That is the "Gresham law." But what is meant by cheapest and what by dearest is not always clearly understood nor how the driving out is to be accomplished, nor what is the effect on the country so situated. The driving out of one metal by another is caused in two ways, according to the relation of the bimetallic country either with another bimetallic country or with a monometallic country or both. I will take the case as between two bimetallic countries with different ratios. One ounce of gold and 15½ ounces of silver had the same purchasing power in France in the year 1834. One ounce of gold and 16 ounces of silver had the same purchasing power given them by law in the United States in the same year. Gold then was under-valued in France as compared with the United States, for the Frenchman could pay his New York creditor a debt of 16 ounces of pure silver ($20·696) with the one ounce of pure gold with which he could only pay his French creditor a debt of 15½ ounces (Fr. 107·1342). Silver was under-valued in the United States, for the New Yorker could pay his French creditor a debt of one ounce of pure gold (Fr. 107·1342) with 15½ ounces of silver, while he would need 16 ounces to pay his neighbour in New York. Gold therefore began to flow out of France, and silver to flow out of the United States. They could not, *both* of them have been the dearest metal, in the sense of either having cost more to produce than the other. Again, if France had by law altered the ratio from 15·5 to 16·25, while the double current was setting, as just now described, it is certain that it would have been reversed, that gold would have flowed back to France, and silver to the United States. No one could suppose that such a movement had any relation to the respective cost of production of the two metals. The "dearer" metal, then in the sense of the Gresham law, is that to which a higher value is attached in another country than that which is attached to the other metal, its monetary mate; and the above process is that which takes place between two bimetallic countries, the change from one to the other metal being accomplished by transactions which seem to the actors in them profitable rather than injurious to themselves.

4589. Do you think the process between a bimetallic country and a mono-metallic country to be such as you have just described?—Not altogether, although in that case also the change would be for the most part automatic rather than the consequence of choice or of deliberate acts. The current from the bi-metallic country would flow outward as described in my last answer, but there would not necessarily be any inward current from the other side. If we take the case of France and England, the course will be this: When the exchange is against France, gold will be exported to redress the balance. The circulation in France will be contracted, and such silver as is produced or can be attracted from other states will be sent in and will fill the void. Meanwhile the process, whether as described in my last answer or in this, is a very slow one, both because of the fluctuations of the balance of indebtedness and because the holder of the under-valued metal (gold in this instance) asks an agio for the waiving of his right to pay in which he will, and this affects the exchange and delays the exodus of the gold. The debtor who sends the gold makes a loss, but the provider of the gold makes a gain; so France is none the worse. In short, whichever be the active cause which carries away the "dearer metal" from a bimetallic country, I fail to discover the "misery" which the country is supposed to suffer; and as to the "inconvenience," we in England are very ready with our pity for the sufferers, but I wait for an intelligible description of the mode of suffering. I do not remember to have seen it pointed out by any English monometallist, and the groans of the suffering French bimetallist have not yet reached my ears.

4590. (*Mr. Courtney.*) When you draw the distinction between automatic and deliberate action in that question, do you mean anything more than this, that the merchant or trader is not at all times conscious of the exact laws under which he works?—That is so. He is not conscious of the laws under which he works. He finds the one a more convenient, a ready way of exporting specie to redress the balance of trade, and so ultimately and by slow degrees, and very slow degrees, the change takes place. I mean to say that the nation does not set to itself this problem, "It will be better for us to get rid of our silver," and send it away, nor does the other nation say, "It would be better for us to get rid of our gold, and send it away: How shall we set about it?"

4591. Though not conscious of that, it is none the less a fact, that to their action is due the bringing about of those results?—Certainly, the individual senders act in that way, because of the reasons which are present to their minds. The nation gets rid of one or the other metal without having any national wish for its expulsion.

4592. (*The Chairman.*) But I gather that you would say that because it is not the deliberate act of the nation, but simply automatic, arising from business transactions with individuals, it would be likely to be more slow in its progress?—I would say automatic, as arising from the natural course of commerce, and because the two countries have so arranged matters that it would necessarily be so, one having

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chosen to have a ratio of 16½ to 1 and the other 15½ to 1, the 16 being an under-valuation of silver of necessity, and the 15½ to 1 being thus an under-valuation of gold of necessity. It is clear that neither nation perceived the significance of establishing different ratios.

4593. (*Sir T. Farrer.*) That makes it to the interest of the particular dealer to send the metal in the way in which you have described?—It is the readiest way. He does not calculate on the expulsion of one metal; I do not think he calculates that, but it does happen so.

4594. (*Mr. Birch.*) As we are talking of a business transaction, I do not exactly understand you to say that they do not know what they are doing; that they do not select the metal which pays best?—I did not say that: They, the individual merchants, do make the selection; but they do not set themselves to get silver out of their land on the one hand or gold on the other. It is not the preference for one currency or the other on the part of France or the United States, but it is that the particular trader or bullion merchant, or whoever it is, who has to remit specie from the one country to the other, finds it to his advantage to remit silver from the United States; gold from France. But it does not matter whether it is a dealer or a merchant.

4595. Every merchant now-a-days has his eyes open when he has to balance transactions. He looks of course to the metal which suits best in the country that he is sending it to?—That is what I say, he can pay a debt with a smaller quantity of silver in France than in New York; he can pay a debt with a smaller quantity of gold in America than in France. It is his interest that teaches him. The merchant, the banker, the bullion dealer have nothing else to consider but their own interest, but I mean to say that it is not the love of one metal as currency rather than the other, but it is the particular interest of the particular individual in each transaction; the result of a multitude of transactions being that the silver left the United States, and at the same time gold left France.

4596. (*Mr. Houldsworth.*) What you mean to say is, that if there was no indebtedness between the two countries, then there would be no driving out?—Mr. Birch has, I think, correctly understood what I mean. I want to point out that it is not a question of preference for gold rather than a preference for silver, but the fact of another country having made such and such a law, which makes it better for you to send gold to that country, and the country from which you have sent gold has made a law which makes it better for them to send silver to your country.

4597. (*Sir T. Farrer.*) It is not even a question of indebtedness; it is that the man who has gold in France finds that he can make more by sending it to America, and that the man who has silver in America finds he can make more by sending it to France?—That I do not exclude. That may be so also.

4598. The indebtedness of one country to another makes that operate more strongly at particular periods, but it would be the interest of the bullion dealers of one country to exchange with the bullion dealers of the other?—Certainly, but all I mean to point out is that Mr. Birch is quite right in saying that it is the indebtedness which is governing the whole thing; the action of the bullion dealers would not be worth while doing if the course of trade and the wants of merchants did not give them the opportunity.

4599. If it were not for a certain premium that they get from the state of trade?—If it were not for the sort of current which is setting, which makes some people demand remittances which they provide.

4600. And give something for that remittance?—And give something for it; of course they get a profit.

4601. And it would depend on the different laws made, whether it would be worth the bullion dealer's while to do it without that state of trade?—Yes, that is so.

4602. Do you think it no inconvenience that a community which has been accustomed to gold as its standard should have to adopt the more cumbersome metal silver?—Do we now pay in gold from hand to hand? Why should anyone suppose that we should then pay in silver? The Gresham law relates to the "dearest metal" and not especially to gold. How would it be with a nation who lost silver for gold; the United States for instance between 1834 and 1873? They were not eager for the change, which was by many viewed with apprehension; but I suspect that the people at large were quite unaware of the change while it was in progress. They woke up to it afterwards, and then you had those discussions in Congress about the fact of small-change silver having departed.

4603. Then referring back to what you said about the cost of production. I do not understand you to deny that the value of the precious metals is affected to some extent by the cost of production?—Certainly not. There is, indeed, an obvious difference between the effect of the cost of production on the value of the precious metals and its effect on the value of other commodities; which is, that the latter are produced to be consumed, and the former are produced to be preserved, and that consequently the cost of production affects the latter rapidly, and the former almost imperceptibly; but the tendency is the same in both. The cost of production of the stock of tobacco existing in the world, including the year's crop, can be readily estimated; but who shall estimate the cost of production of the 1,500,000,000*l.* of gold and silver money now in use in the world, the result of the accumulation of a thousand years. The cost, however, will be found to affect the value in this way: as the amount of money-metal increases in proportion to commodities, all commodities, including labour, will tend to rise, and when the cost of the labour reaches and surpasses the value of the metal extracted, the mines where that happens will be, sooner or later, closed; the quantity of precious metals will tend to approach its former level as compared to commodities, prices falling accordingly. [*See* Mill III. 9.] But this is a process of very exceedingly slow working; and my object is to show, that it is not that which in practice causes a metal to be dear or cheap in the sense of the Gresham law. I may mention that I was talking yesterday to a mining engineer who had charge of one of the sections of the Comstock mine. He said it was absolutely impossible for anybody to make the least computation as to the cost of production of an ounce of silver. It was quite easy to say, if you had got your shaft made, and if the shaft had come upon a silver mine, that the amount of silver that you had gotten out of that particular mine cost you so much, but then you would have to cut off arbitrarily your capital account at the time when you began to find the vein. For every vein that was found in the Comstock mine shafts without number were driven in unproductive land. If you take the country at large, all that expense should form the capital account of the undertaking; and he said he did not believe there was any silver raised very much under 10*s.* an ounce, putting the loss of capital to enterprisers in that way. This was of course a hyperbolical estimate, not an accurate computation, but it showed his view.

4604. (*Mr. Courtney.*) But you would allow that the production of the metals does vary very much with the price realised and the cost of its production, and that in spite of the element of chance, which is such a strong motive on the part of miners. The production of metals, for instance, copper in a particular part of the world goes out because it is produced at much less cost in another part of the world?—Most certainly; but I think copper stands on a very different footing. Copper is made to be consumed, not so fast as wheat indeed, but the case is very different with copper from the case of that which is meant to be preserved. The cost of production, as I have said here, must affect the precious metals like everything else, but the time that it takes to effect it is enormous.

4605. (*Mr. Birch.*) Surely the inference would be the same, because you only get copper out of mines, and change it for commodities, and you only get gold and silver out of mines for the same purpose?—Copper is that which is for destruction, the other is for preservation. What is the amount of copper in the world? A good deal, probably; but how much of the present stock was produced 50 years back? Very little indeed; but gold dates for thousands of years back. One is a mountain, a heap that has been continually added to, the other is a heap that has been added to and continually brought low.

4606. (*Mr. Courtney.*) Did not the discoveries of gold in California and Australia dry up sources in other parts?—I have heard people say that they did, but I do not know it.

4607. Some—not a very large amount—but some amount came from the Rhine countries before that?—So there was gold in England, but I doubt that it was not the cheapness or any depreciation of gold that would have prevented the working of gold mines in England, but because the gold mines, such as they were, were exhausted. There is such a thing as exhaustion of mines. When you want wheat you plant it; you cannot plant silver or gold; you have to look for it.

4608. The copper mines of England have ceased to be worked, not because they were exhausted, but because copper is produced much more cheaply elsewhere?—I do not know how that is. I suppose it is so. But there is a great difference between copper and the precious metals. Those copper mines you say are not exhausted, but the demand at a commensurate price is exhausted. The copper costs perhaps 50*l.*, and nets 40*l.* a ton. At the end of a year you make up your accounts and know your loss. If a gold or silver mine is *exhausted* the result is the same, and is as soon known. But the demand for gold and silver cannot slacken. Extraordinary production has no other effect than a rise of prices over the whole mass of commodities, and that effect is necessarily exceedingly slow, and not obviously and at any moment clearly traceable to its true cause.

4609. (*Sir T. Farrer.*) In fact, the real difference between this and commodities that are consumed is, that here you have a large reservoir, and the flow depends on the height of the water in the reservoir rather than the amount that is trickling into it at the moment?—That is true.

4610. It is sometimes the case, as it was with the gold of Australia and California, that the discoveries have a very rapid effect?—Certainly; both the abundance and the facility, the abundance that exists and the facility of bringing it into use.

4611. (*Mr. Birch.*) But your experience in South America must have shown you that gold was produced there; the washings of the rivers and so on, and then the cost of production was so great that they stopped washing the sands?—I think the small quantity of gold that was produced there, except what was produced in the silver, was rapidly exhausted. There was no great quantity; no great deposits of gold in South America. With the exhaustion of the deposit, the cost of production increases.

4612. (*Sir T. Farrer.*) We hear and see constantly arguments about bi-metallism, founded on a supposition such as the discovery of a mountain of silver; do you think that extreme cases are fair tests of the theory?—Certainly not; else I should retort the argument which sets forth this island's commercial supremacy, as caused by her having a gold standard, by asking if the sole possession of a gold standard of value would make the island of Jersey the commercial mistress of the world. Such things are absolutely valueless, except as a sort of thesis for discussion.

4613. Is not the real answer to an extreme case of that sort, that it would cause as great difficulties under a mono-metallic system as under a bi-metallic system?—Yes. The fear is chimerical, and the difficulties unimportant; but whatever they might be, they would be doubled in its effect on a country which has silver only, as I showed at the last examination.

4613*a*. You think the adoption of the bi-metallic system would not make it necessary to make any change in our token coinage?—Certainly not. No standard silver money would be coined except double florins, which would bear a similar relation to the token coinage to that which the 5-franc piece does to the French tokens, the 5-franc piece being 900 millièmes fine, and the tokens 835. A shilling would still stand for the 20th of a pound sterling, whether that pound was 113·0016 grains of pure gold or 1751·5247 grains of pure silver. If, indeed, silver should still further fall, it may be necessary to call in and re-coin the silver tokens, because the nominal value would be so far in excess of the real that the temptation to the illicit coiner would be irresistible. This illicit traffic has already begun. The rehabilitation of silver, by the adoption of a bi-metallic standard, or otherwise, would make such illicit coinage impossible.

4614. Referring to your answer to question No. 3607, in which you state your views concerning the operation of a bi-metallic law in the case of a country denuded of one of its metals, *e.g.*, France, and in which you state, if I understand you, that the restoration of the operation of the bi-metallic law in France would at once restore the price of silver; will you direct your attention to a mono-metallic silver country such as India, and say whether the establishment of a bi-metallic law there would have the same effect?—I do not think it would. To answer you properly I should first state how far the exchange between bi-metallic and mono-metallic countries seems to be essentially different from that between mono-metallic countries using different metals. I. The exchange between two mono-metallic countries using the same metal is limited by the cost of transmission of the specie (including interest), and varies with the greater or less demand for bills. II. The exchange between a bi-metallic country and a mono-metallic country will follow the same line. It will be counted in that metal which is the monetary standard common to both, and will vary precisely as it would between two mono-metallic countries using the same metal. In both cases the exchange is based on money. III. The exchange between two mono-metallic countries, one using gold and the other silver, is, on the contrary, based on the ever-varying equivalence of the two several commodities, besides the fluctuations consequent, as in the other cases, on the cost of transmission and on the balance of indebtedness. Thus France, being bi-metallic, and the exchange being counted in the gold money metal common to her and England, the price of silver in London oscillated about the point of 60*d.* per ounce, which corresponded approximately to the French ratio of $15\frac{1}{2}$ to 1. Silver, again, being the standard common to France and Germany (before 1873), and the exchange being counted in silver, the price of gold in Germany must have oscillated about a point corresponding to the same ratio. These two are examples of the second category. India is, in its relation to England, an example of the third. There is no true par of exchange between the two countries, and no point of stability in the daily exchange. What would happen if India became bi-metallic? Would the rule hold good that the exchange would be based on the money metal common to both countries, and should I be able to draw on India as I could on France for the money coined from a bar of silver sent thither at an exchange which would give me 60*d.* per ounce, and if not, why not. Let me assume that the ratio adopted in India would be $15\frac{1}{2}$ to 1. The effect on bi-metallic countries, whether their bi-metallism was pure or limping, would be, of course, *nil.* The effect on India herself would be, at at least at the outset, *nil.* The measure would be wholly inoperative there. No one would pay a debt in a gold mohur which would bring him 20 silver rupees, when he could pay it with $15\frac{1}{2}$ rupees in silver. If it were operative, it would not have any present effect in steadying the price of silver here,

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because the exchange on which that price would depend, is, as everyone knows, based at present on the equivalence of money and a commodity, and not on an identity of money metal. But if the resumption of pure bi-metallism in Europe, or any other cause, should re-establish the silver exchange, then the rule would hold good, and India would almost necessarily base its exchange on the money metal common to it and England. So, also, if the ratio adopted in India were that shown by the silver price of the day, say 20 to 1 (which, however, would bring with it much difficulty if 15½ to 1 existed anywhere else) then it would be indifferent to the Indian whether he paid his taxes in a gold mohur, or in 20 silver rupees, and in course of time the position as respects England would be the same as was that of France, and the price of silver here would always oscillate about the point corresponding to a ratio of 20 to 1.

4615. Would you not contemplate if the bi-metallic system is adopted, that both England and India should be parties to it?—Oh yes, certainly; but what I have remarked upon there was the supposition that India was made bi-metallic alone. That was the answer to that question, because you said, taking a mono-metallic country.

4616. (*Mr. Barbour.*) May I ask why you would wish to include India in the bi-metallic union?—Because I think the more that is included the better for the stability of the whole thing.

4617. For the greater portion of Indian transactions I suppose silver would be better than gold?—India would continue to use silver, because it is the most suited to her commerce.

4618. (*Mr. Courtney.*) Is not the outcome of your answer this, that the establishment, in a country which is at present mono-metallic, and having a cheaper metal, of a ratio giving that cheaper metal a value greater than it possesses would be of no effect whatever?—That which you call the cheaper metal, namely silver, would not by the establishment of bi-metallism in India alone be given a value greater than it possesses. It has had no material fall in value in India, and would not be raised. The outcome of my answer is that bi-metallism there only would have no present effect, either in giving it higher or lower value.

4619. You must establish bi-metallism in a country with a ratio which gives the metal in use in that country a less value than it at present possesses. You must give the gold as regards silver a less value 1 to 15 instead of 1 to 20. Then if you established bi-metallism in England you would get a movement?—A movement, yes; but you might establish bi-metallism in France where gold and silver are at that ratio 15½ to 1. To give gold in England a value of 1 to 15½ instead of 1 to 20 as regards silver, would not of course lower its value as to other commodities to a corresponding extent, it would only lower it so far as any slight addition to the mass of the measure of value resulted. So in India; if India were included in a bi-metallic union, the effect would be slightly to depreciate its currency in common with the rest of the currency of the bi-metallic nations.

4620. (*The Chairman.*) When you speak of establishing bi-metallism you always assume, do you not, free mintage and legal tender?—Certainly; and I say in answer to Mr. Courtney, supposing you establish bi-metallism in France, that is to say, free mintage and legal tender, whereas now there is only legal tender, there would be no such effect as that supposed; one metal is not dearer or cheaper than the other in respect of commodities.

4621. (*Mr. Barbour.*) But if you established bi-metallism in England at the ratio of the present day, you would make no immediate change in England?—None whatever.

4622. But you would prevent future changes?—Future changes. It was suggested to me the other day that it was not impossible that the United States might agree, not to open their mints, but to open their treasury, to all the silver that might be brought to them, at the price, of the day. The effect of that would be that the price, 20 to 1 or whatever it might be, would become the ratio and would not vary.

4623. (*Mr. Courtney.*) If you establish in India bi-metallism with a ratio of 1 to 15½, there would be no effect produced?—No present effect.

4624. If with the ratio of 1 to 20?—Then of course there would be the effect described in my answer to Sir Thomas Farrer.

4625. If with a ratio of 1 to 30?—Then an effect would be produced the other way. If you mean in India alone, the Indian would pay his tax of 30 rupees with one gold mohur instead of 30 silver rupees, and would export the remaining ten, for which, on the supposition of 20 to 1 being the price in England, he would get half a sovereign; and this would go on until the price was brought down to the ratio. If you mean as member of a bi-metallic union, the effect would be a great contraction of the currency primarily in India, France, and Germany, and ultimately everywhere.

4626. So that it depends really not upon the establishment of bi-metallism by itself considered in India, but the ratio adopted in India?—Yes, but bi-metallism involves the establishment of a ratio.

4627. You would say arbitrarily the introduction of bi-metallism into India would be of no effect. It depends on the ratio?—That is quite right.

4628. (*Sir T. Farrer.*) I should like to ask you, supposing that England adopted bi-metallism and France adopted bi-metallism at a ratio of 15½ to 1, what would be the effect on the value of the silver now in France?—The effect of that I stated in a former answer. The particular extent of the effect I cannot define, but the uncoined silver in France, if there be any, would of course be elevated to the same position as the coined silver. It would have no effect upon the coined silver in France, except a slight depreciation measured by the amount of the enlargement of the measure of value.

4629. Would it give no additional value to it for the purpose of exportation?—It would be a means of exportation just as the silver in England was a means of exportation in 1848. It would be money in England as well as in France.

4630. Would it not raise its value in relation to gold?—Yes, I should say it would raise its value in relation to gold. It would have an export value as well as an import value; but in France its value in relation to gold would not be altered.

4631. Therefore it would tend on the whole to increase the volume of the currency in gold as well as in silver using countries?—Yes, to the extent that I mentioned in my answer to Mr. Birch.

4632. (*Mr. Fremantle.*) Do you think that a universal bi-metallic arrangement between the civilized countries of the world would have the effect of bringing into actual use in France, in daily transactions, the large amount of the silver five-franc pieces now lying idle in the cellars of the Bank of France?—I suppose you mean by "actual use" passing materially from hand to hand. I am unable to judge of that; you must ask that of a Frenchman, but I know that in Germany there is said to be a great lack felt of the thalers. They wish they had more thalers. That is, I think, the case with German manufacturers. I have always said that I believe the result of the establishment of a bi-metallic law would be that each country would find itself in possession of the metal, as coin, which was most suited to its trade. The five-franc pieces in the Bank of France are not, I think, more "idle" than the gold in the Bank of England. They circulate, I suppose, in the form of notes.

4633. But even at present in France and Germany there is no restriction upon the legal tender of the thaler or the five-franc piece?—None at all.

4634. (*Sir T. Farrer.*) Then supposing that we had the bi-metallic system established between England and India in the same way at a ratio of 15½ to 1, that would raise the value of Indian silver, would it not,

in relation to gold?—In the same way; that is to say, for export purposes, not for internal purposes. There is no more than is wanted in India apparently for internal purposes. It would be a very convenient remittance, exactly in the same case as it was stated before the Committee of the House of Lords in 1848, that silver was a convenient remittance for us, that is all.

4635. But would it not have the effect of raising the value of silver in relation to gold altogether?—Yes.

4636. Therefore it would somewhat raise the value of the Indian currency, and somewhat depreciate the value of the English currency?—I think it would not raise the value of the Indian currency at all, because the value of the Indian currency has not fallen. It bears the same relation to commodities in India that it did before; no difference would happen therefore, except that, as before said, that, with all other currencies, would probably show a slight depreciation—in other words there would be some rise of prices.

4637. Then would it not depreciate the value of the English currency?—I have all along said that in so far as you bring into the mass of currency in the world any silver which is now not available for coin, not available for a measure of value and medium of exchange, in so far you will depreciate the whole mass of currency existing.

4638. You will therefore depreciate the value of currency here in England?—To that extent; how far is quite another thing.

4639. But that would be the tendency?—There would be no "tendency." So far as there are 5, 10, or 20,000,000 of silver that have been thrown back into the mines, so to speak, by being put altogether out of either direct or indirect circulation, their re-introduction would absolutely increase the whole mass of currency in the world; that is all. The future depreciation or appreciation would depend on the increase or diminution of the joint production of silver and gold mines; just as it does now in the gold-using countries and silver-using countries on the increase or diminution of the production of gold and silver respectively.

4640. A question that Sir John Lubbock put to Mr. Grenfell on Friday was this: Supposing England and India both became bi-metallic, you would not increase the volume of the currency, you would have the same quantity of gold in England, and the same quantity of silver in India. And yet you expect to raise prices in England slightly. Would this rise of price happen, and if so, how?—I think that would probably be the case, that is all I say, but as to not increasing the volume of the currency, I should agree to that, if bi-metallic India and England were excluded from commerce with the rest of the world. Obviously whatever addition was made to the volume of currency in any country would soon be spread equally over all.

4641. Sir John Lubbock asked the question in what way it would happen, and I think your late answer expressed an opinion that the tendency would be to raise the value of the Indian silver and depress the value of the English gold?—To level the value of the whole volume of currency, gold and silver, everywhere. It is probable that it would be slightly depressed.

4642. As regards freedom of contract to pay in gold, you do not propose that the bi-metallic law shall prohibit contracts to pay in gold?—Certainly not.

4643. Have you any doubt that in the absence of such prohibition, contracts to pay in gold would be legal?—I have none.

4644. Even supposing there was no legal remedy, the custom of traders might give force to such contracts, might it not?—Yes, and I presume that even if a court of law would grant no damages yet a court of law would probably compel specific performance.

4645. But your argument is that under a bi-metallic system there would be no motive for making such contracts?—Certainly.

4646. Have you considered whether if, while subject to a bi-metallic law, a great commercial community voluntarily adopted a system of contracting to pay in gold, it would affect the market price and place an agio on gold?—If you mean that the community should secede from the bi-metallic agreement, I have shown how great would be the difficulty of doing it, and how little the inducement. But if you mean that remaining in the bi-metallic union, English traders might get into the habit of making two prices, a higher for gold, and a lower for silver, or *vice versâ*, that is if England perversely desired to have more than she really needed of either metal, she would have to pay for it. But I do not believe in the perversity, and I do believe that under a bi-metallic law each nation would practically use that which was most convenient for its needs. It is no doubt possible that a great mono-metallic country such as China might create a great demand for silver for the making of railways. There might then be an agio on silver, by which those who parted with their silver would profit.

4647. Do you know the case of California, do you know what happened there?—I have heard that this was really the state of things. A colleague of mine was in New York in the days of greenbacks, and he had to send a telegram to England. It was necessary to pay the telegram in gold. He went to the telegraph office, and the tape was continually running, showing the course of exchange from minute to minute. The clerk looked, and on that he paid; but in his inn he paid five dollars a day, in greenbacks, for his maintenance. He then went to California, and there he heard, as you said, that the money of the country was gold, so he inquired at his inn what was the price of his maintenance, and he was told $3\frac{1}{2}$ dollars a day. When he came to pay it he found it was greenbacks just the same, five dollars in greenbacks, though the price was $\$3\frac{1}{2}$ in gold. There was no gold to be had. It was only that they chose to keep up the nomenclature, not that they used the actual coin.

4648. Is it not the case that California refused to adopt greenbacks when they were made legal tender by a law of Congress, and insisted on carrying on all dealings in gold? Did not the State pass a law validating contracts to pay in gold, and was not this law upheld by the Supreme Court of the United States? Can you say whether all dealings in California are in gold and not in notes?—I believe it was legal to pay in gold, and make contracts in gold, but practically people made them in gold and paid them in paper.

4649. Your object is to restore silver to its former position in relation to gold?—Certainly not, in the sense of raising the gold price of silver, though that would be a result. My object is to ensure that silver shall take its share in the money work of the world, as was recommended by Mr. Goschen, Sir Thomas Seccombe, and myself in our report on the Paris Conference of 1878; and if that is advisable it seems that the only way of assuring it is by a common declaration of the monetary relation between the two metals.

4650. But in doing that you propose to adopt a $15\frac{1}{2}$ ratio?—That is not part of the principle. It is what I think if I were arguing the question at an international conference I should argue was best.

4651. You believe that is the only practical way of doing it?—I do not say it is the only practical way. The Americans are willing to give up their 16, the French and German hold to their $15\frac{1}{2}$; and the adoption of the latter would seem to me, till better is shown me, to be the most practicable way of bringing it about.

4652. (*Mr. Barbour.*) If the nations agreed to a different ratio from $15\frac{1}{2}$ to 1, would you accept it?—Certainly, because I want the principle, which is far more important than the details.

4653. You would much rather have any ratio than none?—Certainly.

4654. (*The Chairman.*) Do you think there would be practical inconvenience, if the existing ratio were

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20 to 1, in fixing that as the ratio, if all agreed?—Not to us; no, not at all, excepting, as I have said before, that, judging from what one has seen of the very large production in the course of this century of the two metals, it would not be the true proportion of the two metals, the one to the other; but I think that would be of much less consequence, for this reason, that no one knows what the true proportion is, nor ever can learn.

4655. (*Mr. Barbour.*) Would there be this difficulty about the ratio of 20 or 21 to 1, that a great deal of coined silver is now over-valued, and if it came to be re-coined at the new ratio there would be considerable contraction of the currency?—Of course there would be that, that is to say that in Germany and France there would be a considerable contraction, and in America not quite so much.

4656. (*Mr. Fremantle.*) But in Germany and France they would not be coined at the new ratio, would they?—They would either be coined at the new ratio, or the value of the coin would be altered, because we are assuming that we have all agreed on a ratio of 20 to 1. That is the reason why I think 15½ to 1 would be so much more easy to carry out.

4657-8. (*Mr. Courtney.*) If they resumed at 20 to 1 in France and Germany, the 20 to 1 might be established by increasing in that proportion the weight of the five-franc piece?—It can be done by increasing the size of the five-franc piece, or decreasing the size of the napoleon.

4659. Whichever has to be done, it does not matter, the whole point of the observation to which I am working is this, that there need not be a contraction of the currency?—The contraction need not result from having greater weight in the silver coins. You may get the new system established by diminishing the weight of one coin or increasing another. If you increase the ratio to 20 to 1, you unquestionably contract the mass of measure of value throughout the world. You can alter the particular coinage of this and that country, but if out of the mass of silver 20 pieces are to be equal to one piece of gold, there certainly will be less equivalents to one piece of gold than if you had 15½ equal to one piece. The operation of the measure would be as follows:—For all internal purposes, *in France*, the possessor of 20 francs in silver is in as good a position now as the holder of 20 francs in gold. If the ratio were altered to 20 to 1, it would be a recognition within France of the depreciation of silver (as measured in gold) which has taken place outside it, and the holders of silver, and the country through them, would be so much the poorer. The measure of the loss would be the difference between the ratios of 15½ to 1 and 20 to 1 on the amount of silver held as currency in the country—say nearly one fourth. The change in the ratio may be carried into effect by dealing with the silver or the gold. If silver coins were dealt with it would need 20 ounces of silver to make pieces which are now made out of 15½ ounces. This would cause a contraction of the currency until the extra requirements were filled up from outside. If, on the other hand, gold pieces were dealt with, and so many grains were taken from the 20-franc piece, the result, as regards the holders of silver, would be really the same as if silver coins had been dealt with, though the nominal amount of the currency would be increased, for the holder of 20 *silver* francs would only obtain for them a smaller piece of gold than he would have obtained before the change; which new gold piece, though nominally representing 20 francs, would only purchase as much in commodities as 15½ francs did formerly. As regards prices, it is manifest that France by either operation (*i.e.* whether the silver or gold were dealt with) would be poorer by the amount of that extra legal value now given to its silver currency which would be swept away, and the currency to this extent would be contracted. If the operation could be confined to France, prices would, other circumstances being absent, fall to this extent in that country. So soon, however as the void was created, it would be filled up by importations of silver into France, and prices would only be affected there as in other countries by the withdrawal of so much silver from the currency of the world. This would, of course, be exceedingly small. But within France itself the effect on nominal prices would be very different, according to the mode by which the change of ratio was carried out. Prices are now virtually measured by gold, though they are stated in francs, which are both gold and silver. If the silver pieces were enlarged, so as to bring up the silver in them to the ratio of 20 to 1, prices would not change, except to the extent of the temporary contraction above referred to. The new franc would accurately represent the gold price. But if the gold piece were reduced, prices measured still by the gold franc would rise* to the extent of the debasement of the gold coin; that is nearly a fourth. In other words, it would take 24½ *silver* francs, or a new gold piece of 20 francs, and 4½ francs in addition to it, to purchase as much as can now be bought for 20 *silver* or 20 *gold* francs. The debasement of the gold piece, it need scarcely be said, would greatly affect all contracts.

4660. (*Sir T. Farrer.*) Well, what you propose would create a greater demand for silver, no doubt?—Silver, no doubt, would be freely offered for coinage.

4661. You do not think that silver will necessarily be used in this country to a much greater extent than before?—No, I do not think that silver would be much, if at all, more used in the internal commerce of this country, not a single piece beyond what might be required by the public.

4662. (*The Chairman.*) Why should it create a greater demand for coinage if your hypothesis is, as I rather understood it to be, that it would not alter the habits of the people as to the particular metal which they used?—I mean this, that it would not alter the habits of the people in the particular countries as to the metal they had used. In Germany, more silver thalers, would, it is said, be welcome; and the fact of the Mint being open would ensure their being coined. It would be in the same case with gold here; one does not say there would be a demand for more gold, but when it comes in, it comes to the Mint, that is to say to the Bank, and forms part of the reserve of the Bank. The Mint is open to the gold, and therefore it becomes money at once, and that, which is not now the case with silver would be so in the case supposed, not of necessity for circulation in this country, but as being useful for export, guaranteed, at least as to fineness, by the stamp of the Mint.

4663. (*Sir T. Farrer.*) Silver is not and cannot be as easily used as gold as a remittance to pay the balance of international trade?—No, not as things are now.

4664. Silver under a bi-metallic system would be equally valuable with gold, consequently you would for that purpose create a great demand for silver?—For silver, but not necessarily for coinage, though its coinage might add to its convenience.

4665. (*The Chairman.*) When you say that there would be a greater demand for coinage, what you mean really is for purposes other than coinage?—Silver would generally have more purchasing power; I do not see therefore that it would be more sought for purposes other than the serving as money.

4666. (*Mr. Fremantle.*) What do you think is the reason that the thalers in Germany remain in the banks and do not go into general circulation?—I do not know that that is the case. I suppose the bank keeps its reserve for its own convenience in gold and silver. Nobody has yet been able to ascertain how much it has got of either of them. In France, one knows it exactly, but in Germany one does not know. All my knowledge is got from a friend of mine in Germany, a manufacturer there, who says, "I am always endea-

* This rise would be temporarily counteracted to a small extent, owing to the virtual contraction of the currency resulting from the sweeping away of the present over-estimate of the silver coin.

"vouring to get myself a good store of thalers, "because the people like them."

4667. What is to prevent their coming into circulation now?—I think they are in circulation, just as the gold in the Bank of England is, but the Bank must keep its reserve. It has got a reservoir of silver, and out of that reservoir people supply themselves.

4668. In what way would a bi-metallic arrangement change that condition of things?—Only that the Mint would be open to the coinage of silver; therefore when silver was made a remittance to Germany, silver would go to the Bank or to the Mint, just as when gold is remitted gold goes to the Bank or to the Mint.

4669. (*Sir T. Farrer.*) You say that silver would probably not be more used in currency in this country, or very little more; but whether it is so used or not, the effect of your proposals will be to increase the quantity of the precious metals used as standards, whether gold or silver?—Yes, I should say it would, certainly. My point has been, as I have said before, that less fluctuation in supply would be the thing, but there would be an increase, if I said right in my former answer to Mr. Birch, there would be some increase, but no one can absolutely say how much or how little that increase would be.

4670. If so, when, and how do you suppose that this increase will appear?—In the general though moderate increase of the measure of value all over the world as compared with the mass of commodities measured.

4671. Will this addition to the currency appear in the amount of cash used by people in their ordinary transactions, including, of course, notes issued against the metal deposited in the Issue Department?—I do not know that I can say how it would. It is through more spending power; that is the way it gets increased.

4672. Yes, but in order to operate it must be somewhere; where will it be?—All over, I think, everywhere, sooner or later.

4673. Do you think it will be in the increased amount of cash reserve in the banking department of the Bank of England?—The reserve of the Bank of England is merely a reservoir from which there is a continual flow. Various causes contribute to raise or lower the level of what remains in it. It might be low though a large import of bullion had been lately received.

4674. What I wanted to get at was in what way it would operate. I am now speaking of what you consider a subordinate object, but I want to find out in what way this increase would operate to restore prices to their former level, from which, as is assumed, they have been displaced by the depreciation of silver?—Only in the way that I have already said, by the general increase of the measure of value in comparison with the things measured; on the principle stated by Hume.

4675. Can you explain what is the exact connexion between the supply of the standard metals and prices? How would an increased or a diminished supply operate?—I will suppose a great discovery of gold in Australia. The finders of the gold are so much the richer, have so much the more to spend, and spend it there and elsewhere, overbidding their neighbours, and enhancing the price of the commodities which they desire. The receivers of the higher prices profit accordingly, and are themselves able to spend more at home and abroad; and the influence of the increased production of the measure is felt in ever widening but more faintly marked circles over the whole range of commodities measured. The holder of the gold outruns his neighbours in the chase after commodities, bidding higher prices for them, or in other words offering his gold at lower prices; just as had the increased production been in wheat or any other commodity, the holder in search of a customer would offer it at lower prices. But the production of the additional quantity of wheat cheapens wheat, cheapens it directly as compared with gold alone, and indirectly as compared with all other commodities; for gold in all gold-using countries is the measure of those other commodities. So then the price of wheat is lower—not necessarily than it was before—but than it would have been had the additional quantity not been produced. The production of the additional quantity of gold, in like manner, cheapens gold, cheapens it as measured in commodities, so that the gold prices of all of them are, not necessarily higher than they were before, but higher than they would have been had the additional quantity of gold not been produced. The wheat is but a passing addition to the wealth of the world; but each ounce of gold, whether it is to be had for the picking up, or costs 4*l.* to produce, goes to swell permanently (barring wear and tear) the mass of the measure of value in the world and tends accordingly to the rise of prices. The converse of this is, of course, also true. Suppose a million sovereigns shipped from Australia to England and lost on the voyage. The spending power of those who lose it, and of those with whom they would have spent it, is in an analogous manner diminished, and the mass of the measure of value is permanently diminished, causing, sooner or later, a general fall in prices.

4676. (*The Chairman.*) If you remonetize silver, do you mean that it would have the same effect as if you discovered so much additional gold?—*Pro tanto*; that is to say, the bi-metallic system having been adopted, and the whole commercial world using both gold and silver, the discovery or the reproduction of silver that has been laid by, and, as one may say, put back into the mines, would be the same as the discovery of gold, in the proportion of the fixed ratio. If silver (or gold) be absolutely laid by, withdrawn from any influence upon the price of commodities, it is the same as putting it in the mines.

4677. But if you do not change your ratio, and take your present ratio of silver to gold, that silver is at the present moment exchangeable with gold at the rate of 20 ounces of silver to 1?—There would be no addition if there were no change of ratio. My last answer was made on the supposition that there was to be a change of ratio.

4678. (*Sir T. Farrer.*) I wanted, if I could, to get at the exact point where the precious metal is exchanged for commodities. I want to know exactly where it operates. The gold is somewhere. It is either in the hands of the public as circulating medium, or it is in the bank reserves. I want to know, would this addition operate upon one, or upon both, or upon which of those?—It would operate in turn upon all of them. Of course the production of more silver or more gold, the putting of a new store of money, in short, into the pockets of any individual, would tend to bring more gold into that reservoir of which we have spoken, the Bank of England. From that reservoir it would flow out; it would be a reservoir from which there are discharging pipes all over the country.

4679. Then if it operates upon the circulating medium through the country would not you expect that it would operate on retail prices, because it is in retail transactions that gold and silver are used?—Certainly, it is in those transactions that the metals pass from hand to hand; but the effect, speaking generally, is that retail prices do not rise at the same time, at least to the same extent, as wholesale prices do.

4680. Then my next question is, are gold and silver used in wholesale dealings?—Very little indeed, as passing from hand to hand.

4681. But what we find is this, that gold is used in retail transactions and not in wholesale, and yet you say retail prices do not fall or rise with the diminished or increased supply of gold while wholesale prices do. Can you explain that?—Wholesale prices will rise. That means to say, whether gold passes or not, that if, for example, I have received a commodity for sale, I am able to sell it at a higher rate, for a greater quantity of gold. I sell it. I touch

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no gold, but instead of receiving 5,000*l.*, I receive 6,000*l.* for my commodity. That belongs to me. It is transferred to me in the books of my banker. It is a mere transfer, but I am the richer. If we both bank with the Bank of England, it is a mere transfer.

4682. But we have been talking of the greater or less quantity of this physical material gold, and this physical material gold does not appear in those transactions at all. I want to know where it does appear to influence the transaction?—It appears in this, that by that transfer, gold in the vaults of the bank which was the buyers' becomes mine. Your point seems to be that retail prices, where sovereigns are actually passed from hand to hand, ought to rise when more sovereigns have been produced which should so pass. My point is that the passing of the gold itself from hand to hand is of no moment. Gold is the basis, and has been broadened, and a larger superstructure can be raised on it. I gain spending power, and thus prices rise. I, who have got this money at my credit, am able to give a higher price for a horse than I otherwise would, or for an estate; and the seller of the horse or the estate is in his turn enriched and would enrich others, the effect diminishing with each step as time goes on.

4683. You have got an order by means of which you can draw upon your banker; and for which he is obliged to give you sovereigns if you want them; but you never do want them?—Let us put it in a more concrete form. Let us suppose, as it was in 1853, that I received a consignment of a large quantity of gold. We will suppose also that the consignment, instead of belonging to my friend in Australia, belonged to myself. I had made a speculation in the gold and I had written out "any amount of ounces that you can buy at 3*l.* an ounce send over to me;" it is quite clear that I should have made 17*s.* 10½*d.* an ounce for my gold; I should be the richer. Two things would happen, in the first place that I am made richer, able to give a higher price for an estate, or a horse, or a breakfast, or anything, and besides that, the measure of value in the world is increased as compared with what it was before.

4684. (*The Chairman.*) Your first proposition I completely follow. Of course there is more gold which measures value, but the question is, whether such an increase as that added to the quantity of gold produces an appreciable effect upon the total of prices in transactions, which transcend enormously the quantity of gold that exists?—I think it would be impossible for us here to go into that whole argument. I should not feel myself competent to do so, in the time at our disposal. I give my authority; I say that is Hume's statement, which has always been accepted by economists, namely, that the mass of the measure of value, as compared with the mass of commodities, is that which in the long run and as a whole is price; that is, not only regulates price, but is price.

4685. (*Mr. Barbour.*) Do you think that the value or purchasing power of gold depends on the demand and supply, as with the value and purchasing power of other things?—Yes, surely it does. The way I put it is, that the gold is cheaper. I have to offer my gold, when I get a quantity of it, at cheaper rates, just as if I had wheat, an inordinate production of wheat. I am forced to offer that at cheaper rates. That is how it happens.

4686. (*Mr. Courtney.*) There are two theories which are a little independent of one another, and have to be connected by some element of time. First of all there is this theory that prices vary directly as the quantity of the money in circulation?—Yes.

4687. So that if you have got a quantity of money in circulation, *a*, to which there is an addition made, *b*, then the new price is to the old price *a* plus *b* to *a*?—Yes.

4688. And if *b* is small compared with *a*, there is very little change?—That is precisely it.

4689. But the immediate effect of the addition to your stock of a certain amount of gold might very greatly alter the range of prices in certain commodities. There would ultimately be a new level, but there might be an immediate effect differing widely from that level?—I quite agree that the alteration of price in certain commodities would be very large at first, that is, at the place and time of any new discovery of the precious metals; but a level would be reached in time.

4690. (*The Chairman.*) Would not the extent to which prices generally were affected by an addition to the stock of the precious metals which form the standard depend not merely upon the per-centage which the addition bore to the total amount of the stock, but upon the relation which the number of transactions, measured by the money, bore to the amount of the stock?—Certainly, it might not be simply the per-centage; but I am not sure that the number of transactions is of much importance. It is the number of commodities which affects the matter. If commodities increased *pari passu* with money, there might be no change in price. I think Mr. Courtney's way of putting it is exact, but it of course requires the addition of the words *ceteris paribus*. There are many things which would alter that proportion, and that you have now mentioned is one of them, that every banking expedient makes a new discovery, perhaps, more important. I mean that if you discovered 100,000,000*l.* of gold now, that would have a greater effect upon the stock, the more the banking expedients had made the use of gold, in general transactions, not necessary. This point can be better investigated if we cast aside the idea of banking expedients, and imagine a community transacting all its business by delivery of coin in exchange for goods or service. Then it is manifest that though there may be a multitude of transactions (only limited by the physical possibility of effecting the transfers in the 24 hours) where the same piece or pieces should pass through many hands, and convey the same goods, or others of the existing stock of goods; but it is manifest that simultaneous transactions must, at any given moment, be limited by the number of the population, the number of pieces of money, and the number of commodities or acts of service. *E.g.*, if there were 1,000 men, having 1,000 pieces of money, and 1,000 exchangeable commodities, it is clear that 1,001 transactions could not take place at the same moment. Add 10 per cent. to the money, the spending power would be increased, and the ultimate result would be that the commodities measured by the 1,100 pieces would, taken as a mass, be higher in price. Let the money remain constant, and let the commodities be increased, the contrary result would of course take place, and prices would fall. If population increased to 1,100, while commodities and money remained constant, no change of price would ensue, but transactions would multiply. But increase of population really involves increase of commodities, and we may therefore treat commodities and population as one. It is clear therefore that increase of money or scarceness of commodities must raise prices, and scarceness of money or multiplication of commodities lower them. We know how fiduciary notes economise gold, how cheques economise notes, and how the clearing-house cancels cheques. Take away these expedients, and not all the gold in the world would serve for the internal transactions of Great Britain alone without great inconvenience to commerce and the daily transactions of life. But not on this account is the effect of the changes in the relative amount of gold and commodities diminished; on the contrary, it is increased. If the gold in England were 800,000,000*l.* instead of 100,000,000*l.*, the addition or subtraction of 50,000,000*l.*, or a corresponding subtraction or multiplication of commodities, would alter the proportion by $\frac{1}{16}$. But if the total were 100,000,000*l.*, such a sum subtracted or diverted from it would alter it by one half. The gold money in the world is computed at upwards of 800,000,000*l.* One quarter of that sum has been taken away from its former office of measuring the goods of the gold-using nations, and set to measure the goods of Germans. In other words, the mass of commodities measurable

by gold has been increased by those used by Germany, and prices, as shown above, could not but fall.

4691. I am not quite sure that I understand why, on the hypothesis you are putting, prices should have gone down of late years, because though there have not been such large additions to the currency, there have been additions to the gold currency?—It is because of the subtraction that has taken place; that is to say, that the Germans, and the United States, and the Italians, have set the gold to do other work, or rather to do work that it had not had to do. It is the same sort of work, but more work than it had to do before.

4692. You put it, that it is by excluding the silver that they previously used?—They excluded silver, and took gold.

4693. Taking gold would not matter, because it would not matter where it was. You are not speaking of the amount of precious metal in any particular country, but you are looking at the whole world, are you not?—Yes, certainly; but for the reason you have just stated, the taking of gold is important. The more nations are using gold, and the more gold is used from hand to hand, so much the more commodities has the gold to measure. What you have just now advanced would be perfectly right if the excluded silver filled the place left vacant by the gold that had been taken; that is to say, if gold and silver were joined together, and were working the whole exchange business of the world; but gold has to work the exchange business of the gold-using countries, and the more countries you put into that category, the more the gold has to do in the way of measuring; the more commodities the mass of gold has to measure. It is not a case of destruction of precious metals, such as I spoke of in a late answer, but of diversion to new tasks. Mr. Mill in describing increased production of the precious metals, speaks of it thus:—"The "money which thus overflowed would spread itself to "an equal depth over all commercial countries." To follow his metaphor, I may say that there is always a certain water-level of currency over those nations more or less suited, or with time suiting itself, to the wants of their trade. It was in this case gold, and spread over the gold-using nations. If between them and their silver-using neighbours the sluice is drawn up, and the gold allowed to spread itself over them also, the increased area of the whole gold-using region must necessarily cause the attenuation of that which overspreads it, and which therefore must stand at a lower level. But that level is the measure of the purchasing power spread over the gold-using countries, and a lower level, therefore, necessarily means low prices. The adverse effect on prices seems to me to be conclusively shown; and even the proved presence of other circumstances, some of which, such as banking economies, should raise prices, some of which, such as increased production and increased facilities of transmission of commodities, should contribute to lower them, in no way affects the demonstration. That which I have asserted is, and must be, a necessary factor in the lowering of price. The only problem is to what precise extent it has been assisted by the last, and to what precise extent it has been counteracted by the first, and that is a problem which no man can satisfactorily solve.

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Witness withdrew.

Adjourned till Friday.

Twentieth Day.

Friday, 13th May 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. H. CHAPLIN, M.P.
MR. J. CHAMBERLAIN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, BART.
MR. C. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.
SIR JOHN LUBBOCK, BART., M.P., and

MR. GEO. H. MURRAY, *Secretary.*

MR. SAMUEL SMITH, M.P., called and examined.

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4694. (*The Chairman.*) You have given considerable attention, I believe, to the subject of the currency?—Certainly, for many years.

4695. And to the variations in the relation of gold and silver, to one another and to commodities?—Quite so; I have taken up this subject from the very outset of the movement about 10 or 11 years ago, and followed everything or nearly everything that has appeared on the subject.

4696. Your view is that there has been a material appreciation of the gold standard of late years?—Certainly.

4697. Do you mean by that an appreciation of the gold standard in relation to commodities by reason of the appreciation of gold as distinguished from the depreciation of the commodities?—I think so; I think that the purchasing power of gold has increased very much in all gold-using countries.

4698. In what way do you think that is established?—Well it would be a long argument to give all one's reasons for thinking so, but I would state what is the result of close observation of the causes that determine prices gained by 30 years' commercial experience. I have been engaged in a trade on a large scale in which one is called upon to observe very closely all that affects price. I may mention for the information of the Commission that I have been engaged in the cotton trade, much of the time on a large scale, especially in the Liverpool market, but also in India and in America, and it has been my chief business to watch everything that tells upon price with the greatest closeness, in fact the success of our business wholly depended upon accurate views regarding all influences affecting price, and it has been made obvious to me for several years past, that the heavy and long continued decline of prices was not owing merely to the ordinary causes, which cause fluctuations from year to year, but to some deeper and subtler

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cause which I have no doubt whatever is a decided appreciation of the gold standard. There are ample reasons for that appreciation.

4699. Can you tell us why you attribute it to an appreciation of the gold standard rather than to an increase in the supply of commodities, or a diminished demand?—I will give you one reason which to me appears a very cogent one. We had a steady increase in the prices of all commodities from the discovery of the Australian and Californian mines about 1850 which went on more or less up to 1873. The general rise of prices was about 40 per cent. during that period. We had during that period a rapid increase of production. We had a continued increase of appliances for cheapening production. We had keen competition, a reduction of charges. We had the rise of our great railway system. We had the introduction of steam and telegraphs; in fact all those agencies came into play which ought to have produced a fall of prices according to ordinary calculations, and in place of that we had a steady rise of prices amounting to about 40 per cent.

4700. But is it a fact that there was a steady rise of prices? Were there not many cases in which the prices were lower than they were in years before that?—I would not say so. There were of course credit cycles which we are all familiar with, years in which there was more inflation, in which there was a commercial crisis and depression. We had, for instance, the commercial crises of 1857 and 1866, each of which produced a temporary fall of prices, but the average kept rising, the steady average of prices kept rising year by year as you can see by referring to the index numbers of *The Economist*.

4701. Then do you depend for that statement upon the prices as shown in the index numbers of *The Economist*? — Not entirely upon *The Economist*, upon the index numbers of many of the leading economists. I have examined some of them and I have given in my own pamphlet one compounded from several index numbers by Professor Foxwell, which I imagine is as copious and complete as any that has been published, as it deals with a very large number of articles.

4702. But the results shown by using index numbers differ considerably do they not, according to the articles that you include or exclude?—Not very greatly. I have gone over several lists. They do not differ very materially.

4703. And the results are arrived at by setting falls in price against rises in price are they not?—The results are arrived at by giving the average price of these commodities in each year.

4704. You take a certain number of articles, the index numbers of those articles, and you find what was the total result in the year as regarded all these articles put together?—The usual principle upon which we arrive at prices is to take the average of a year for one article, we divide the quotations week by week, we add together the quotations for the whole year and divide by the number of weeks.

4705. But if you take it separately for each article you do not mean to say that in respect of each article there was a rise up to 1873 and a fall since?—No; what I would say is this; all commercial statistics depend upon averages. There are separate influences which affect each article undoubtedly, and you can only go by large averages in calculations of this kind. Some articles rise more, other articles rise less, but the general average rise of all commodities together was as I state about 40 per cent. between the year 1850 and the year 1873.

4706. Yes, but some fell as well as some rose did they not?—I should think very few fell, the great bulk rose, and some rose of course more than 40 per cent. to balance those that fell.

4707. And do you think that that rise during say the five years preceding 1873, arose from the currency. There had been no fresh discoveries of gold for a long time before that had there?—I should judge that the period immediately preceding 1873 was in some degree a period of inflation as the period from 1866 to 1868 was one of depression.

4708. You would expect a period of inflation to be followed by a period of depression?—Yes.

4709. And the greater the inflation the longer the period of depression?—Usually.

4710. Was there not about the time you have named a great unwillingness to trust foreign States which previously had been trusted with large sums of money for railways and other industrial undertakings; and would not that tend to diminish the demand for many important articles of commerce?—Somewhat.

4711. You consider that the appreciation of gold standard is put by the best authorities at no less than 20 per cent.?—I think so.

4712. Appreciation since what date do you refer to?—Since 1873; I take that date as my starting point because that was the year in which the demonetization of silver first fairly came into view.

4713. But in the five years succeeding 1873, the prices were much about the same were they not, or rather higher than in the five years preceding 1873?—Taking *The Economist* numbers I find that in the five years preceding 1873, they were 122, 121, 122, 118, and 129, and then the five years succeeding 131, 126, 123, 124, and 115, therefore, higher every single year until you come to 1878?—I think the best test is the value of British exports. The value of British exports reached 255,000,000*l.* in the year 1873, and they fell steadily and almost continuously after that to 1879, in which year they were 191,000,000*l.*, and yet the quantities kept increasing all the time.

4714. May not those two things have had something to do with one another? If quantity increases beyond a certain point, is not that one of the very things that will bring down prices?—I allude to the question of quantity to show what a very great decrease in prices there must have been, because in 1873 the value of our exports was 255,000,000*l.* In 1879 it was about 191,000,000*l.*, and yet there was a considerable increase in quantity. The object of my argument is to show what a heavy fall there was in the price of many articles.

4715. But taking coal for example, was not there ample to account for a great decrease in the price of coal, without any reference to an appreciation of gold?—I have no doubt there were reasons for a fall of price apart from the appreciation of gold, but for a very much more moderate fall than has taken place. If I may be allowed to remark further in connexion with that, I would point out that we are all perfectly familiar with the principle of credit cycles in business, according to which there are two or three years of great activity and rising prices, and then a commercial crisis or a check at least of business, and two or three years of falling prices; the swing of the pendulum usually is about 20 per cent. from top to bottom—10 per cent. above the mean on the one side and 10 per cent. below the mean on the other. I have no doubt that we would have this downward swing of the pendulum from the prices ruling in 1873, probably a fall of 10 to 20 per cent. from the highest point. That I fully allowed for, but I think the long continued fall in prices is owing to the appreciation of the standard itself.

4716. How do you suppose that appreciation of the standard has acted?—The result of its action is this constant dwindling of prices.

4717. But how has that result been produced?—That is one of the most subtle problems probably in economics, and very difficult for any one to precisely explain. It is like asking why the influence of frost upon vegetation is so and so. We see and know that a cool temperature has a certain influence on vegetation, and a warm temperature has another influence. In the same way I should say that a steady increase in the supplies of money always has had in human history a tendency to raise prices, while on the other hand a steady falling off in the supply of money has had a steady and constant influence in the way of reducing prices. That has been proved, by human

history spread over many hundreds of years, conclusively.

4718. But would it not be much more likely to have an effect upon prices at a time when the course of commerce was to exchange commodities for some precious metal which was the standard, than at a time when the bulk of commercial transactions was carried on without any such payment of the precious metals?—I do not think I could answer that question.

4719. Of course you do not differ from the view that at the present time a vast proportion of the commercial transactions are carried on without the payment or exchange of any of the precious metals?—Certainly.

4720. And the more that is the case would not the effect of a diminished supply of the precious metal which was the standard be less felt?—I doubt that, because the precious metal is the basis upon which all credit is based. All notes, cheques, and so forth are in the last resort exchangeable into the precious metals.

4721. Yes; but what I want to get at if you could give me an idea of it is, how you suppose that a diminished supply of the gold or the currency has this very great effect in depressing prices?—I would say that in this particular crisis which has existed for about 12 years, one of the methods by which the fall of price has been brought about is the competition of countries having a silver currency. Those countries are able to produce cheaper now than countries having a gold currency, and wherever the products of countries having a silver currency come into competition with the products of countries having a gold currency, then the tendency is to force down prices in countries having a gold currency.

4722. That I perfectly understand; but is not that an entirely different question from the general question of the diminution of price by reason of the appreciation of gold?—I think it is in some degree, but you ask me to explain the methods by which a diminished supply of the precious metals forces down prices. I reply that it is one of the subtlest of all agencies, and it is doubtful whether any one could give a perfectly accurate account of the process, but in the present instance, this crisis which has existed for the last 12 years, I think you can put your finger upon one cause which undoubtedly tends to force down prices, and that is the competition of the produce of silver-using countries.

4723. That brings in of course the question of a change in the relative value of silver and gold?—Yes.

4724. Then you attribute the diminution of price in part to an appreciation of gold generally in relation to commodities, and in part to the effect of competition with silver-using countries, owing to the change in the relative value of gold and silver?—I must say the two things are mixed up together, because the appreciation of gold has been largely caused by the depreciation of silver; they are, in fact, one and the same thing to a very large extent.

4725. As between silver and gold they may be, but not as between gold and all commodities?—I think they do affect that as well, because had silver not been depreciated, had the old ratio of 15½ to 1 existed, we would have had to-day a higher scale of prices in all countries having a gold currency and a lower scale of prices in all countries having a silver currency.

4726. Yes; but that is from a different cause, is it not, from the appreciation of gold in relation to commodities owing to the scarcity of gold?—I should say as I said before that the two things are inextricably mixed together. Had we had no change in the bi-metallic system of Europe I still think there would have been a fall in prices, because the joint production of the metals is not sufficient now, scarcely sufficient for the wants of the world. We would have had a fall in prices, but we have had a much greater fall in countries having a gold currency, owing to the separation between gold and silver.

4727. Now you say that even the joint production of gold and silver is not sufficient? The production is very considerable both of gold and silver still?—Yes.

4728. And much more than sufficient to replace tear and wear?—Yes; but there are constantly new uses and large new uses for the precious metals. For instance, in the last 12 years the new uses for gold have reached about 200,000,000*l.* sterling, that is to say, we have filled up countries that had a paper currency before with gold.

4729. That has been done and has added so much to the currency of the world, has it not?—I would rather say it has taken the reserves out of one class of countries in order to fill up the reserves of another class of countries.

4730. Yes, quite so; but when you are speaking of the appreciation of gold you are not speaking of one particular country, you are speaking of the whole commercial world, are you not?—Yes.

4731. And you must look therefore at the total which exists in all countries?—Yes; while in all countries having a gold currency the fall of prices since 1873 is enormous; in all countries having a silver currency there is a very slight fall indeed.

4732. Yes; but what I was directing my question to is this: You said that even if you took the joint production of gold and silver the difficulty would remain, although it would not be so great?—The difficulty would be much lessened.

4733. I want to understand why it exists at all; you say it arises from an insufficient supply of the precious metals, how does that affect people? I want to look at the thing practically; where does it come in to produce the mischievous effect which you suggest?—Let us take an extreme case. It is always by an extreme case that you can test a principle best. In the middle ages the mines almost ceased to yield altogether; the stock of the precious metals of the world ran down immensely from what they were in the time of Alexander and the times of the Roman Empire. Every one knows that there was a very large stock of the precious metals then, as shown, for instance, by the enormous captures that Alexander made in Asia. He captured some 20,000 talents of gold, as you will remember, at one time. Very well, the mines almost ceased to yield for several hundreds of years, and the stock of precious metals, in the view of all economists, ran down in the 14th century to an extremely small point, and along with that the prices of all commodities fell to an extraordinarily low figure. For instance, the selling price of a bullock in England was 2*l.*, the selling price of wheat was 10*s.* or 12*s.* a quarter, the price of wages, the wages of a man was about 3*d.* to 6*d.* a day, and everything measured by money in the same way fell to an extraordinarily low price. Then came the discovery of the South American mines, and for 200 years there was a constant steady rise of prices till the average was raised fourfold. The price of all commodities in the 17th century was about fourfold what they were in the 14th and 15th centuries, and the stock of money in the world was very much larger.

4734. At that time the practice of commerce was exchanging the commodity for the precious metal, was it not?—Even in those ages I should think that the greater part of commerce was carried on by bills; bills were used for purposes of exchange from the earliest times. Much the larger part of commerce I should think was carried on by bills and bank notes.

4735. Do you think in the same proportion in relation to the commerce then as now?—No, I should not think so.

4736. But what I rather wanted from you, if you could give it, was how under existing circumstances the want of this currency comes to be felt; there is enough existing for all practical purposes, is there not?—I will put it this way. There always will be enough for all practical purposes, because prices will always adjust themselves in proportion to the volume of the currency, that is to say, if you were to close up the mines for 100 years, at the end of that 100 years you could still say there was enough

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currency for all practical purposes, but prices would be then one quarter, or one half, of what they are to-day.

4737. Of course that is so; prices will fall in that way, but we will suppose there is a diminution of 10 per cent. in the production of gold, how should that bring down appreciably the prices of commodities which are dealt with during the year to the extent of 10, 20, 30, or 40 times the amount of the total currency in existence?—I think that the relation between the annual yield of the mines and prices is but slight, and hardly perceptible. You have to take it over a period of years before it tells, because the existing stock in the world is so large that the addition of one year's supply is very trifling, and therefore the changes in the yield from year to year, I would say have not a perceptible effect, but when spread over periods of years, long periods of years, then the effect is very perceptible. For instance, between the year 1809 and the year 1850 the effect was most perceptible; there was a prodigious fall of prices, and there was a very small yield from the mines. For several years the yield of gold was only about 4,000,000*l.* or 5,000,000*l.* a year in all the world. The yield of silver was almost extinct for several years owing to the closing of the Spanish mines, and there can be no doubt that that had much to do with the extraordinarily low prices ruling between the years 1830 and 1850. Then again the great rise of price from 1850 to 1870 was clearly connected with the immense addition to the currency of the world caused by the discovery of the gold mines of Australia and California. As to the broad effect, there is no doubt; as to the method in which that effect was brought about, I think it is very difficult indeed for any one to give the *rationale*.

4738. But, except the monetary change in 1873, there has been no particular change since, has there, affecting the precious metals?—Since 1873 there has been a great reduction in the amount of the precious metals available for money in Europe, a very large reduction indeed, and it has arisen from two causes; first of all, the mints of Europe have been virtually closed against silver since 1873 and 1874.

4739. I speak of since that time, say since 1874; there has been no other change since that time, has there?—No; but there has been a constant falling off in the supply of gold, and a very large new demand for gold, amounting, as I said before, to 200,000,000*l.* sterling. That new demand amounted to much more than the whole production of the mines, and was largely drawn out of the stocks of countries that already had a gold currency. It is generally believed, for instance, that the stock of gold held in England to-day is very considerably less than it was 12 or 14 years ago.

4740. I think you said that when you were looking at this question, you looked at all commercial countries together, so in that view it would not matter that the gold was in one rather than another, would it, if the same total currency existed?—I think it would very materially, because, take 1873; at that time the United States had an inconvertible paper currency. They had not resumed specie payments. There was no specie in America. It had all been expelled during the civil war. A higher scale of prices ruled in America, as usually happens in countries with an inconvertible currency. Then it was decided to resume specie payments, and the same effect happened in America as happened in England after 1816. We resumed specie payments. We had a period of very great depression and heavily falling prices. So they had in America. From 1873 to 1878 was a time of intense depression in America, prices of everything falling enormously. At the same time they purchased a great quantity of specie in Europe, and they were able to resume specie payments, and specie supplanted inconvertible paper currency. The tendency in America has been towards lower prices generally over the last few years, just the same as in England. The same causes which produced low gold prices in England produced low gold prices in America.

4741. But why should that be so if all countries together still possess the gold. Although its transference has taken place from one country to another, why should that produce low prices everywhere?—Well, there is a much larger amount of work for gold to do. Gold is called upon just now to do the work of exchange over a far larger area of the world than was the case prior to 1873.

4742. You mean by substitution for the silver?—Yes, partly by the substitution of gold for silver, and partly by the substitution of gold for inconvertible paper wherever nations with inconvertible paper took a metallic currency. Of course they have to draw their supply of specie out of the stock existing in the world, and that tends to lower prices all over those countries in which gold is the circulation. Let me give an illustration. Russia just now, Austria, and some other States are countries with an inconvertible paper currency. Supposing those countries were to do what Italy and America have done within the last few years, and what some other countries are trying to do; supposing they were to replace their inconvertible paper by a gold currency you would again have a very heavy draft upon the existing stocks of gold, the effect of which would be to force down prices further in all gold-using countries.

4743. You put it at 20 per cent. Is it the combined effect of all the causes to which you have alluded, or the appreciation of gold in relation to commodities alone that you put at 20 per cent.?—Of course it is only a guess. No one can give anything but a guess. I have formed my own opinion after reading the views of the best economists on the subject, and indeed most of the literature on this subject, and in a very rough sort of manner I would put the appreciation of gold since 1873 at 20 per cent. on the same principle that Jevons and other writers put the depreciation of gold at 15 per cent. between 1850 and 1870. I think they were too low. My opinion is that the depreciation was more than 15 per cent., but still I adopt the same basis on which they acted, and I should say that 20 per cent. is a fair estimate of the appreciation since 1873, and the other 20 per cent. fall in prices I would attribute to other causes such as the natural reaction from a period of inflation, and the economising expedients which are always tending to reduce certain articles.

4744. (*Mr. Houldsworth.*) How much do you put to that?—I would be inclined to divide the fall of 40 per cent. between the appreciation of gold which I put at 20 per cent., and the economising process in the production of commodities and other causes which I would put at the other 20 per cent., but it is only an estimate of the roughest kind; no one can give anything else on such a subject.

4745. (*The Chairman.*) You attribute the rise of prices from 1850 to 1873 to the discoveries of gold coupled with the free use of silver?—Yes.

4746. But there had been no great discovery of gold for some time before 1873, had there? There had been what we may call a normal annual supply?—The supply of gold kept steady and large to that period, not quite so large as it was a few years before, but the supply of silver was increasing, and the aggregate supply kept about the same all that time. I think it averaged about 40,000,000*l.* of both metals, or nearly so.

4747. You say the annual supply since 1873 has been insufficient for the purposes of currency?—I would rather put it this way. I think it has been insufficient to maintain the standard of prices that existed in 1873. I would not say insufficient for the purposes of currency, because, as I observed already, no matter how much you may reduce the supply of the precious metals they will always appear to be sufficient because the fall of prices will occur contemporaneously, and the two things will balance one another.

4748. Do you think that the consumption of gold for purposes other than currency has increased?—I think very much. I have been carefully inquiring into the opinion of the best authorities, and I am

surprised to find that a man like Soetbeer, who is looked upon as the best authority on the subject, puts the consumption of gold in the arts as high as 12½ millions annually, out of a total supply of 19 millions. Laveleye, who has also devoted great attention to the subject, puts it at about the same.

4749. Is that higher than it used to be?—I think much higher.

4750. How do you account for that if everybody is so badly off?—Look at the gold watches and gold chains used all over Christendom compared with what used to be the case.

4751. One would rather have expected a reduction in the demand for the arts in times when there is so little money to spend?—I think as matter of fact, however, much more gold is used. I am told, it is an amusing statement to make, but I am told that the amount of gold used in the United States for stopping teeth is half a million sterling every year.

4752. Then the amount remaining for the currency is of course so much reduced. And you calculate that of what remains for currency a portion goes to India?—The average export of gold to India or to India and China is about 4,000,000*l.* sterling annually and that is not used as money, it is melted into ornaments or hoarded.

4753. Then there is some consumption in the British Colonies?—A very considerable consumption.

4754. I believe you do not think that during recent years the economising expedients have been much developed?—I scarcely think there has been any change in the last 10 years or so. I think they have been carried about as far as it is possible to carry them in countries like England and the United States.

4755. I think it has been suggested that the system of cheques as one economising expedient has been a good deal developed in France of recent years?—Yes, in France because that was a backward country in the use of commercial credit.

4756. And in Germany has it been increased also?—I do not know enough of Germany to be able to say.

4757. In this country has it not to some extent been increased by an increase in the number of branch banks now to be found in small places where previously there were no such facilities?—I am not aware that that reduces the amount of specie required for trade to any extent, because these banks all must hold reserves. The best proof of the neeessary requirement of a large amount of specie even in a country where every economising expedient has been developed is to be found in the United States of America, because as I observed already since the resumption of specie payments America has taken about 150,000,000*l.* sterling of gold and silver combined to supply its circulation.

4758. But do you know how that money is utilised in America?—I presume very much the same as it is in England, but less largely.

4759. Do you think that there is anything like that in circulation or in reserves of banks?—Well, a large portion always must lie in banks in reserve as security for their circulation, that is really being used. That is the method in which gold is largely used nowadays.

4760. But where do you get the figure from, because I think it is considerably higher than what we have had from any other source?—Well, I think Mr. Goschen amongst others stated it, and I have seen it repeatedly assumed as true. I have no doubt of the fact, that the United States have taken about 100,000,000*l.* of gold since it resumed specie payments, and the coinage of silver, I am speaking roughly, from memory, has been I think nearly 50,000,000*l.* sterling; that is 150,000,000*l.*

4761. (*Mr. Birch.*) You stated just now that on account of these numerous banks much greater reserves had to be kept than formerly?—I am inclined to think that wherever there is an extension of the banking system there would tend to be larger reserves.

4762. But then I think you also stated that you consider that there is 20,000,000*l.* less gold in the country than there was a short time ago?—Well, I have seen an estimate that there are 20,000,000 fewer sovereigns in England. I have seen several estimates to that extent as compared with what we had 10 or 15 years ago, but I think that was taken partly out of the pockets of the people as well as out of the reserves of the banks. The general belief is that there are fewer sovereigns in circulation.

4763. (*The Chairman.*) There do exist large accumulations of bullion do there not in some of the national banks?—Certainly.

4764. And interest has ruled very low of late years?—Yes.

4765. How do you account for that?—I would account for that by the great depression of trade. There is no surer index of the depression of trade than a very low rate of interest. I suppose during the last 12 years we have had the lowest rate of interest that has ever been known in England, taking the average.

4766. I am not quite sure what you mean by a great depression of trade, because I understood you to say that the trade that we have been doing, though not a valuable one, had been a bigger one?—The trade that we have been doing has been exceedingly unprofitable. During the last 12 years nearly every branch of it has been exceedingly unprofitable.

4767. Yes, but it has been very large in amount, in quantity?—The money value has been greatly reduced. The quantity of commodities produced annually increases with the increase of the population and machinery. It cannot be otherwise. That does not indicate a prosperous trade.

4768. But when you speak of the value having been very much reduced as regards a great many branches of trade, that might be perfectly true, and yet the profit may be the same as before, may it not?—I think the general profit made by the commercial community during the last 12 years has been very greatly less than it was in previous periods.

4769. That hardly answers the question I was putting to you, that the fact that there is a reduction in the value of the manufactured articles is not a test of the profit that is made on the manufacture, in as much as if you get your raw material 20 per cent. cheaper you can afford to manufacture 20 per cent. cheaper and make the same profit?—That is quite true. But the value of the exports from this country were 255,000,000*l.* in the year 1873 while last year they were only 212,000,000*l.*

4770. (*Mr. Chamberlain.*) There has no doubt been a fall in the money value of the exports from the highest period, but as far as my knowledge goes the returns of the banks and the turn over of business has been as great or greater than it was?—Well, I am not able to answer that question, but I should have thought that there was a shrinkage in value pretty much all along the line. I would put it this way, however, that prior to 1873 there was a very rapid constant increase, and that rapid constant increase came to an end and has been at an end for several years past.

4771. (*The Chairman.*) But a large part of the shrinkage in the value of exports would be accounted for, would it not, by the fact that raw material had very much diminished in value also?—No doubt.

4772. By depression of trade you mean the unprofitableness of trade, not the small extent of trade but its unprofitableness?—Well, the unprofitableness mainly, but when trade becomes very unprofitable it affects the quantity as well, because works are shut up or worked upon short time. There has undoubtedly been a great deal of short time during the last 10 years in most of the large trades of the country.

4773. That to some extent has arisen, has it not, from an increase in the number of places of manufacture and economy by means of machinery?—No doubt in part, but the singular fact is, as I observed before,

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that in countries having a silver currency that depression has not been felt; it is only in countries having a gold currency.

4774. But prices of manufactured goods are lower in countries having a silver currency, are they not?—A little lower, about 10 or 15 per cent.

4775. Because I thought one of the suggestions was that because they produced and sold at so low a price, they brought down prices here?—They were able to sell at a low gold price, but got back a good silver price.

4776. You mean prices as measured in silver?—Quite. They got back satisfactory prices to themselves measured in silver, silver being their sole standard, and they are able to sell at a very low gold price.

4777. (*Mr. Birch.*) Yes, but imported articles, the articles that they imported would have risen in value measured in silver, would they not?—Of course they buy them at a very low gold price.

4778. (*The Chairman.*) Then, in your view, high rates of interest with active trade are better than low rates of interest and a languid trade?—Most certainly.

4779. Do you think that the damage done by the monetary crises in 1857 and 1866 was small compared with the damage done by what you refer to as the long continued depression since 1873?—Certainly the damage done by those crises was very brief; it was just a temporary paralysis, but in a year or two afterwards the country was at full work again, and trade very profitable.

4780. A large volume of trade, though with a small margin of profit, may be a very advantageous thing, may it not, for a country generally?—I think it is best for the country generally that trade should be reasonably profitable. When it becomes very unprofitable it ultimately tends to decay, besides causing a great loss of capital to the country. I have no doubt the classes engaged in many of our large trades are very much poorer now than they were 13 years ago.

4781. You think the evils resulting from an appreciation of the monetary standard may be divided into two classes—those affecting ordinary trade, and those arising from fixed burdens payable in money?—Yes. Of course I attribute most importance to the latter of the two.

4782. Take first the first of those two causes. What have you to say in regard to that?—Well, with regard to ordinary trade, every man in business is familiar with the effect of a long continued fall in prices. It produces the extinction of the poorer class of traders—the struggling, rising class of traders—the small men with little capital, who cannot stand heavy losses. That was the state of English trade during much of the period covered by this inquiry. Prices were constantly declining—crumbling away; all calculations turned out illusory, till at last a feeling of something like despair crept over most of the trading centres of England.

4783. That is the result of falling prices whatever the cause of the fall?—Yes.

4784. That result of course would cease when prices had found their level, though it were a low level?—It would cease to operate upon a new class of people. The old class of people have been largely swept away.

4785. They would have borne their loss, but it would cease to operate as soon as prices found their level?—Yes; I think last year was the lowest point of the whole decline. This year there has been a slight recovery in some things.

4786. Now the working industrial classes if they had been employed at the old rate of wages and steadily employed would have gained by the low prices?—Yes; if they had been employed, which they have not been.

4787. In your opinion they have suffered from a fall of wages, I do not mean relatively suffered, but they have had to submit to a fall of wages?—Yes.

4788. Do you think to the extent to which they have benefited by the low prices?—I think the fall of wages has not been so great as the fall in the price of commodities. That is matter of common knowledge, but there has been a great loss of time, a great loss of labour power, because in most trades work has been very slack and the poorer and weaker class of labourers have been turned off altogether as a rule.

4789. There has not been any very great increase of pauperism, has there?—The reason of that is that the system of out-door relief has been curtailed very greatly of late years. The tests are more stringent, and so pauperism is kept down apparently, but the amount of charitable means given for the relief of distress the last few years has been very great. I think much greater than it was before.

4790. (*Mr. Chamberlain.*) But if the volume of trade is as large as ever, is not the labour employed upon it as great as ever? Is there therefore any reason to believe that the amount of labour employed is less now than it was 12 or 20 years ago?—I think the labour of the country has not been so well employed over the last 12 years as it was the previous 12 years.

4791. That may mean that the increase of the trade has not kept pace with the increase of the population, but it does not mean an actual reduction, does it, it would only be a comparative reduction?—Yes, the volume of trade seems to me a somewhat ambiguous term. If you try to define it more exactly, I think you would perhaps come to somewhat different conclusions. The volume of trade measured by its money value has decreased, I think.

4792. Yes, I am only speaking not of the money value but of the quantity?—The quantity produced has increased in many trades owing to the improvement of machinery; that is to say, the same machinery will turn out 25 per cent. more in many trades than it would have done 12 years ago, but it does not employ more labour, meanwhile the population has increased and the number of the unemployed labouring class has increased. Let us take an illustration. Supposing you are the owner of a factory that employs 1,000 men and you turn out now 25 per cent. more than you did 10 years ago with the same 1,000 men, there is an apparent increase in the volume of trade, but your 1,000 men have growing families and you ought to be employing 1,500 men in order to take up the increased population, but you cannot do it.

4793. (*The Chairman.*) But if you have a continual increase of production by the improvement of machinery and other means, must not the effect of that be necessarily to reduce prices and to diminish the amount of labour employed?—Yes, as I observed before, I think there is a constant tendency in machine-made goods of all kinds to lower prices, because new inventions enable them to be made cheaper. But there is another set of causes which tends to raise prices in all old communities which goes a long way to counterbalance that. In all old communities the tendency is to a rise in price in most things in which labour enters very largely, such as building operations; food also. Many kinds of food usually grow dearer, so that, I think, if you take commodities as a whole and values as a whole, one can hardly say off hand that the natural tendency is for them to get cheaper from year to year. I doubt it.

4794. But in building operations, may you not overbuild? I should have thought that that was a case in which it was very easy to out-run the needs of the population?—Of course you can overdo anything; but I mean to say that, taking long periods of time, the tendency of prices should not be lower in the country in one period as compared with another.

4795. You think that the persons employed in industrial occupations suffer in the end, but are longer before they feel the suffering than those who are employing them?—Certainly; that is always the case, because when trade becomes bad employers go on hoping for some years, spending capital, improving their works, trying to cheapen their processes, always hoping a turn of the tide will come, and during that period the workmen do not suffer, especially in trades

where they have strong combinations. At last there comes a time when the employers can stand it no longer. Their capital is exhausted, works come to a stand-still, attempts are made to force down wages which are met by strikes; then comes the time when the operatives suffer.

4796. Your next point has relation to the burden of fixed contracts payable in gold; what have you to say with regard to that?—That has long seemed to me to be the most weighty consideration as bearing upon this question which is before this Commission. In an old country like England the amount of permanent engagements of all kinds is something enormous. I daresay this Commission may possibly have read an estimate which I have offered, which of course is a very rough estimate, for there are no figures available, but I have submitted it to several statists and actuaries and others with a view of getting further information, and no one has been able at least to point out any defects in it, and some have pointed out that probably some of the figures are much larger than I have put them. We have first a National Debt of 750,000,000*l.*, with interest and sinking fund amounting to 28,000,000*l.* per annum. I suppose we must call it 26,000,000*l.* now since the last budget. Then we have railway bonds and preference shares amounting to 500,000,000*l.*, with interest averaging, say 4 per cent., or 20,000,000*l.* a year. Local and municipal debts are estimated at about 160,000,000*l.*, say at 4 per cent., 6,400,000*l.* per annum. Then we have the vast amount of mortgages on land. I have tried to get information on that subject from the best authorities, and find it is impossible, but I think that 500,000,000*l.* is a very moderate estimate; indeed, I would not be at all surprised if they amount to much more. Let us take interest at 4 per cent., and that will be a fixed burden of 20,000,000*l.* a year. Then we have the mortgages upon all kinds of property other than land, such as house property, factories, ships, and on industrial plant of all sorts. I have put that down at 500,000,000*l.*, but I am inclined to think that it is very much more from what I have since learned; but call it even 500,000,000*l.* at 4 per cent., that is 20,000,000*l.* a year. Then we have further to take into account the great number of long leases in our country. We have a great portion of all our towns built upon building leases of 99 years, with fixed rates of payment. I have not been able to get any estimate of the amount, but I suspect it is at least 30,000,000*l.* a year that is drawn from these long leases. Then there are the royalties on mines, which have been felt as a heavy tax of late years owing to the very low price of minerals. These royalties I have put at 8,000,000*l.*, but I am told by those who are investigating the subject that probably the amount is nearer 12,000,000*l.* In addition to all these there is a very large amount of fixed annuities, pensions, life interests, &c., chargeable on most estates or payable by the Government. It is well-known that many of these estates have of late years hardly afforded any surplus to the nominal owners after paying interest on mortgages, annuities, and other fixed charges. I roughly assess the total of annuities, pensions, and other fixed charges, not included in the other items I have dealt with, at 18,000,000*l.* a year, and this will make the total fixed charges payable out of the industry of the country about 150,000,000*l.* a year, but I think it is not impossible that the amount may turn out to be 200,000,000*l.* if we had the means of making an exact computation.

4797. Some of them at all events would have been borrowed at a lower rate of interest because of these depressed times when the interest was low, would they not? When you can borrow at 3½ per cent. owing to depressed trade and the appreciation of gold, you may be as well off as if you had borrowed at 4 per cent., or rather had to pay 4 per cent. with brisk trade, and gold not appreciated?—Well, that is an objection which I have often heard made. The reply I will give to it is this. Suppose I am the owner of a factory for which I paid 100,000*l.* during a period when trade is prosperous. I put a burden upon it of 50,000*l.* I have 50,000*l.* of capital of my own. After 10 years of bad business I feel myself compelled to sell the factory. I get 50,000*l.* for it. The whole of that goes to pay off the mortgage, and I am ruined. That is the process through which thousands of persons have gone during the last few years; it is the position in which thousands stand at the present moment. The mortgages, which were originally but a reasonable and moderate portion of their property, now eat up the whole property.

4798. That is by reason of depreciation in the value of the property?—Exactly.

4799. That no doubt arises from other things than the appreciation of gold?—No doubt it does.

4800. In Lancashire, for instance, are there not a number of mills which were formerly supposed to be worth a great deal, worth only a very little now, because they are not suited for the kind of machinery necessary to turn out the goods that are now used?—Even the newest mills are very largely depreciated.

4801. Is it not a fact that there is a good deal of depreciation due to the cause which I have suggested?—Some of it is due to that, but I think a large part of it is due to the other cause, because had this country had a silver standard this depreciation would not have taken place, and those difficulties would not have occurred. My own impression is that if at the present time you could put up to auction the whole of the industrial plant of this country and sell it off, it would not do much more than pay the mortgages and fixed charges.

4802. But now, taking railways which you have given us, people have to pay a large amount of this annual burden of debt, but they can get money now more cheaply than ever they did, can they not?—They can borrow at a lower rate of interest.

4803. And they have of late been paying off old obligations and contracting their new ones at a considerably lower rate of interest?—No doubt they can borrow at a lower rate of interest, but if railway rates are reduced, as is generally thought to be unavoidable and quite necessary, they will still be left with this enormous burden of mortgages, and their own property will be greatly reduced.

4804. Then as regards the payment of the public debt, the people who would suffer would be the taxpayers, who would be obliged to find the amount in gold although the incomes which they derived from business and otherwise were less?—Yes.

4805. Of course, so far as those payments were made by persons with incomes payable in gold, there would be no suffering at all?—No, the class that benefits by this state of things is the annuitant class, all who have fixed incomes payable in gold. They benefit undoubtedly at the expense of the rest of the community.

4806. Of course it is very difficult to work the matter out, but the people who have been paid interest or dividends by all these railway companies, and in respect of so much of the national debt, from which a certain deduction was made for the payment of the taxes of the country, would feel no additional burden?—I suppose not.

4807. The burden would result in the case of people trading, I suppose, or engaged in agriculture?—I should say the classes that suffer most from the present state of things are all the active industrial classes of the country, the farming class, the owners of factories, mines, workshops of every sort and kind, ships, and so forth. These people all trade upon borrowed capital more or less, and, owing to the shrinkage of their property, the borrowed capital comes to represent a far larger per-centage of their property than it once did. In the case of very many they have been sold off, and the mortgagee has appropriated the property, and oftentimes it has not been enough to pay off the value of the mortgage upon it.

4808. The depreciation of agricultural land arises from low prices, does it not?—Of course the fall of

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prices in the produce has forced down the price of the land.

4809. Therefore the cause of the low value of land must be sought in the cause of the fall of prices?—Yes.

4810. Do you think that the fall of prices of agricultural produce is due entirely to the appreciation of gold, or largely?—I would divide it between the appreciation of gold and the opening up of new markets, and the cheapening of transport and facilities of various kinds. I have no doubt that a very considerable part of the fall in wheat is owing to the imports from India, which the low price of silver relatively to gold enables the people of India to make to this country. Just as the rupee falls, so the Indian producer can lay down his wheat cheaper and cheaper here. When the rupee is at 1*s.* 6*d.*, the Indian producer can lay down his wheat here at 30*s.* a quarter, but when the rupee is at 2*s.* the Indian producer can lay down his wheat here at not less than 40*s.* a quarter; and, of course, when he sells lower than others he forces down the price of all the other wheat to the same rate. It is the lowest seller that dictates the price to other sellers.

4811. That must depend, must it not, on the extent of his supply as compared with the supply elsewhere? He cannot, by selling a limited quantity at a low price, force everybody to sell at a loss?—No, but as long as the supply keeps up to the same level, and he chooses to take that price, he forces down all the other supplies to the same price.

4812. Do you know what proportion the Indian wheat imported into this country bears to the total quantity of wheat imported?—I think India now sends about 4,000,000 of quarters of wheat; we receive altogether, I think, about 15,000,000 of quarters of wheat into this country.

4813. That would be something over 25 per cent.?—Yes, I think India sends about 4,000,000 quarters of wheat; perhaps not all to England, but I think she exports now about 4,000,000 of quarters.

4814. Of course you must look at the relation which what India sends bears to what is produced here, plus what we import from elsewhere?—Well, the effect of these very cheap supplies is gradually to lessen the area sown in this country. Every year the area gets less and less, and we are also getting somewhat less from America than we did, but a very small surplus of supply is quite sufficient to force down the market.

4815. We may take it that in your view a large fall in value at all events has been brought about by the demonetisation of silver in Europe?—Yes, concurrently with the falling off in the supplies of gold.

4816. In addition to the evils that you have already mentioned, in your view the result of an appreciated standard is that the creditors benefit at the expense of the debtors?—Quite so. I think that is one of the most serious evils.

4817. That, of course, must depend on the time at which the parties respectively lent and borrowed?—Yes, but in the main debts are permanent: that is to say, the trader who mortgaged his property in 1873 for 50,000*l.* cannot afford to do without the mortgage at any future time; he is obliged to keep the mortgage on, to keep renewing it. Take the case of landowners. They cannot afford to reduce the amount in mortgage in depressed times, they rather increase it. I think the total amount tends to increase from year to year. At the present moment it perhaps represents, we shall say, probably 50 or 60 per cent. of the property of the country. Probably 10 years ago it did not represent more than 40 per cent. of the property of the country.

4818. In your view, as the debtors are the most numerous class and the creditors are the rich and leisured class, that increases the evil?—I think so; I think the working of our whole system tends to make the richest class in our community still richer at the expense of a far larger number of comparatively poor people.

4819. Do you include in that far larger number of comparatively poor people those who borrow 50,000*l.* upon a manufactory?—Well, I should say that, as a rule all the industrial class, large or small, are large borrowers of capital. The banking deposits of this country, which amount to 500,000,000*l.*, are nearly all lent out to the trading class. The trading class absorb the bulk of the floating capital of the country, and use it in their business, in addition to a certain amount of capital of their own. Well, the very heavy fall in the price of all property has, so to speak, largely bankrupted that class. It has swept away their own margin of capital, and their property now is little more than sufficient to pay the heavy claims upon it.

4820. Still the person who lends that money, the creditor takes a low rate of interest for it; the person who borrows it, if trade is profitable, makes large profits, which the creditor in no respect gets the benefit of?—Quite so.

4821. Therefore it is natural, is it not, that the risk should rather fall upon the debtor than the creditor?—Well, I think not. During a period of ordinarily prosperous trade it is a very healthy operation this, by which the capital of the leisured class is used by the actively employed class. The leisured class is content to take four per cent. for it, we shall say, and the employed class used to make, perhaps, an average of eight per cent. interest. It suited them to borrow, and to give their brains and energy to the management of business; but for the last 10 years, the employing class has, perhaps, not in the average, earned so much as four per cent.; I much doubt if they have earned that, and there has been such a shrinkage in the capital value of their property, that now, in many cases, it would only be sufficient to pay off those mortgages, and leave them nothing at all. They have had all the labour, all the toil, and all the anxiety of conducting business for many years, and find themselves getting poorer and poorer all the time, whereas their creditors, who have had no trouble at all, are entitled to their full tale of bricks.

4822. Because they would have got none of the benefit if things were profitable. The whole benefit and profit would have gone to the debtor?—The debtor would have been entitled to that.

4823. Yes, but one does not quite see why you suggest that it is reasonable that some of the loss should fall upon the creditor, if things are not profitable?—I would rather put it this way. It is not so much a question of reasonableness as what is for the good of the community. Now, seeing that the active industrial class is a far larger class than the capitalist class; seeing also that they are the mainspring of the prosperity of a country, I think what works for their good is of more importance to the country than what works for the good of a comparatively small class of capitalists, some of whom are enormously wealthy. And the hardship I feel arises from this, that the burden of debt has been artificially increased by changes in law. If these changes in law, which demonetised silver so widely, had not taken place, this burden of debt would not have been increased nearly so much; prices would have been higher; trade would have been more profitable.

4824. You attribute to this depression of prices, I believe, the protective tariffs which have been imposed or increased in different continental countries?—I think it has largely tended to increase protective tariffs all over Europe. It is only within the last few weeks that both France and Italy, and I think Germany also, have increased their duties upon food owing to the outcry of the agricultural class.

4825. Coming now to the remedy, what do you think is the proper remedy for the evils to which you have called attention?—The only practicable remedy that I can see is a restoration of silver to its full use as money by a group of nations.

4826. And coining silver at a fixed ratio to gold?—A fixed ratio to gold, yes. I would restore the system which existed before 1873 in France and the Latin union, only I would make it a condition now

that the union should be a much larger and wider one.

4827. What area do you think would be sufficient to bring about the results that you desire?—I think if we could induce Great Britain, the United States, France, and Germany, to enter the union, it would virtually fix the ratio for the whole world, and very soon would be adopted by nearly every country in the world.

4828. (*Mr. Courtney.*) Would Great Britain include India?—I think it would be better to keep India a single silver standard country; that is rather my impression.

4829. (*The Chairman.*) Why would you exclude India if bi-metallism is the proper basis?—It is a very difficult question, but I think on the whole it would be found desirable to keep India a silver standard country. One reason is this, that the European powers might be afraid of a deluge of silver coming into Europe in exchange for their gold. I think that is an imaginary fear, but it would probably operate as a very real drawback.

4830. (*Mr. Houldsworth.*) Would you consider that if the countries that you named adopted the bi-metallic system and India was excluded, that still the bi-metallic law would operate in India?—Oh, entirely, quite the same as if she was included.

4831. (*The Chairman.*) That is to say that the effect of introducing bi-metallism into these other countries would be to raise the price of silver?—Yes, up to the ratio at which it was agreed to fix silver. Whatever price was adopted the price of silver in India next day would rise to that point.

4832. What is the ratio that you think should be adopted?—That is a point upon which we ought to be allowed liberty of opinion, because it depends on expediency. I think it is of such importance to the world to gain a bi-metallic system that I should be prepared to sink any special views of my own in deference to whatever might be adopted by the nations interested in the matter, but if you ask me what I think would be fairest and justest to all concerned, I certainly should say the old ratio, because upon the old ratio the great national debts of the world were contracted amounting to about 5,000,000,000*l.* sterling, and I think it is more just to all concerned that those debts should be restored to the basis upon which they were contracted instead of being made payable in the artificially enhanced standard.

4833. You mean the basis on which they were contracted, in this sense, that at that time silver bore a particular relation to gold by law in certain countries and by market value in other countries?—That is all. Even in England, where we had a single gold standard, we felt the effect of the French law quite as much as if we had it ourselves. That is to say, the value of the gold in England was as much affected by the French law of $15\frac{1}{2}$ to 1 as if we had had the law of $15\frac{1}{2}$ to 1 in England.

4834. Would the effect of that be to raise prices?—I think in all gold countries it would raise prices somewhat; in silver countries it would reduce them and produce an equilibrium between the two.

4835. Would it be likely to raise all prices?—In gold countries not very much. I think it would be a very gradual process, but it would partly undo the great mischief which has been caused by the excessive fall of prices.

4836. You think that there would be no injustice in taking this course, because it would be only replacing the state of things which existed prior to 1873?—There would be a small injustice done to people who have pending contracts with silver-using countries for the purchase of produce, but that would rectify itself in a few months, because these contracts all run off in a few months, and a change of this kind should not be made without previous notice. I think the injustice, comparatively speaking, is trifling compared with the great injustice which has been already done to far larger interests by the demonetisation of silver. Of course, when an evil has once been done, it always causes some disturbance to get back to the former state of affairs. I have no doubt of that, but I think the disturbance is but trifling compared with the enormous evils that have been done by the previous change.

4837. (*Mr. Barbour.*) I wish to ask you a question or two upon the effect of the supply of wheat from India. Suppose that the rate of exchange was such that India could supply any quantity of wheat at 30*s.* a quarter, would it not be necessary for the price of wheat grown in this country, or grown in America and sent to this country, to be reduced at least to 30*s.* a quarter?—It would force the price of all other wheat down to that point.

4838. Because otherwise it could not be sold; Indian wheat would take its place?—Quite so.

4839. And the American and English wheat having been sown, India might have to send only a very small quantity of wheat to produce this effect upon prices?—She would require to send a surplus of supply; it need not be a large amount.

4840. But if India had a surplus sufficient to supply any quantity, then the prices of English and American wheat could not rise above 30*s.*?—Of course not.

4841. (*Mr. Birch.*) You stated that there has been a material appreciation of the gold standard of late years, which the best authorities put at no less than 20 per cent., and this is shown by the heavy general fall of prices, though other causes have contributed to it. I suppose you would allow that some of the authorities deny the appreciation of gold, though they acknowledge a general fall in prices, which they attribute to various circumstances, affecting an over supply of commodities rather than a short supply of the article for which the commodities are interchanged?—I suppose there may be such authorities; though I have met with very few, I have read a great many opinions on the subject, and I think it is very generally admitted now by all thinking men that there has been a considerable appreciation of gold. I believe every economist in France and Germany admits it, so far as I know.

4842. You talk of the demonetisation of silver. Silver has not become demonetised. They have suspended the coinage in the Latin Union, but the 45,000,000*l.* in the Bank of France, and an enormous amount of silver in circulation, is just as much money as ever it was, and it is the same in Germany?—Strictly speaking, what we mean is the stoppage of the free coinage of silver. There has been a very considerable demonetisation, for Germany has sold off a large quantity of her silver. So has Holland and the Scandinavian countries; but speaking particularly, when we speak about the demonetisation of silver we mean the stoppage of the free coinage of silver.

4843. Then the gold discoveries in 1848 and 1850, of course, affected prices, but do you not think that the great stimulus that then was given to railways and the manufacture of steamers and other things went a long way to help to raise prices?—Well, I think that is just one of the results of a large supply of money. You communicate an impulse to one branch of trade that communicates an impulse to another branch of trade, and it gradually spreads through every branch of trade.

4844. But then the result would be that with new facilities for moving produce, prices would naturally fall on account of increased production, would they not, and the labourers employed in making the railways would lose employment?—I do not think that one could give a very sure answer to such a question as that. Prices kept rising from 1848 or 1849 up to 1873. It was a long period. The railway system of this country was almost completed before 1873; it did not cause prices to fall.

4845. (*The Chairman.*) You said that prices rose till 1873, but, taking the *Economist* index numbers, I find that in 1871 they were lower than in 1868; in 1869 they were lower than in 1868; and in 1870 they were exactly what they were in 1868?—I am quite aware of that.

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4846. Then what do you mean by speaking of prices constantly rising?—There never was and never will be such a thing as a continuous rise of prices year by year. One has always to speak of averages or groups of years. What I mean when I say that prices rose 40 per cent. from 1849 up to 1873 is just this, that there was a series of upward ascents in prices, varied by short descents, but still the ascent continued pretty constant up to 1873, and by that time the general level was about 40 per cent. higher than it was in 1849.

4847. (*Mr. Birch.*) You stated that the annual supply since 1873 has been insufficient for the purpose of currency?—It is hardly possible to say what supply of money is sufficient and what is insufficient for currency, because whatever the supply is, prices adapt themselves to the supply, and there appears to be sufficient for these prices. The two things mutually adapt themselves to one another.

4848. Yes, but you see when Italy thought she would introduce a gold currency, she wanted about 18,000,000*l.* of gold, and she obtained them without any difficulty at all?—Quite so.

4849. In the same way the other day about 5,000,000*l.* were required, I think, by America, and she obtained them from the Bank of France, paying 5 per mille premium?—Quite so.

4850. Therefore it would not appear that there is this great scarcity?—I have never said that there was a scarcity of currency; I do not think there is.

4851. Then you state that it is true that as nations advance in civilization they dispense more and more with coin, and use cheques and other economising expedients, but in this country and America it is doubtful if these expedients have developed much of late years. Is there not ample proof that, at all events in this country, there has been an immense development in economising expedients?—There was a great development. I am not aware that it has made much more progress the last 10 or 15 years. I see the returns of the Clearing House have been nearly stationary the last 10 years.

4852. Then as to nations using inconvertible paper currencies going on to a specie basis, can you explain how you think they would be able to carry it out?—The way Italy carried it out; the way the United States carried it out; the way Austria hopes to carry it out. They gradually acquire the means of doing so, if they steadily set it before them. I admit that it is a very difficult thing for a poor country to do. Italy was a very poor country a few years ago, but she managed, nevertheless, to make a convertible currency.

4853. Only by making a loan in this country which enabled her to do it?—I have no doubt there would be a continual succession of countries, one after the other, that will seek to establish themselves upon a specie basis. That you may take for granted, it is the natural progress of civilisation.

4854. You have stated that if the currency of the world was reduced to one-half of what it is now, during the next 20 years there would be no scarcity of bullion at the central reserves, and the rate of interest would rule very low; that we should see an incessant fall of prices, intense depression of trade, a total absence of all enterprise, and a less demand for capital than usual. That to me is such an extraordinary statement that I should like to ask you how you think that could possibly be arrived at?—I think the history of the past proves that that is accurate. You will find—it is a curious fact, but it is the reverse of what one would think at first sight—that when you have a very large production of the precious metals you have generally high rates of interest. We never had higher rates of interest in this country on the average, I suppose, than from 1850 to 1873. They were much higher, I believe, than any preceding period, say from 1820 to 1830, from 1830 to 1840, and from 1840 to 1850, and they were also much higher than from 1873 on to the present time. Now, you would have said, at first sight, that, having such a very large supply of both gold and silver, especially gold, coming into use as money, we ought to have had low rates of interest; but the fact is exactly the opposite, and this is the reason of it. It caused a steady rise of prices, and every business man knows that that quickens industry in the most marvellous way, every one seems to be making money, every manufacturer tries to increase his production, it sets agoing the whole industrial machinery with the greatest energy, because every man is filled with hope and expectation; new enterprises turn out well, and the result is that the demand for capital on loan increases in even a greater proportion than the supply of money that comes into currency, and therefore the rates of interest become higher.

4855. Surely the increased gold supplies did not cause the high rate of interest or the monetary crisis. The true reason must be found in speculation and great stimulation to trade of all descriptions?—Yes, I have no doubt there was a great stimulation to trade of all descriptions, and that that stimulation ran to excess, as is well understood. Whenever you have a long period of profitable trade you have always a sort of after-growth of speculation and inflation on the back of it, and that produces the crisis which is nature's wholesome way of throwing off the evil.

4856. If bullion were drawn in by the banks so as to reduce the currency by one-half, the tendency would surely be to make interest high?—I think that would be the first and immediate effect, undoubtedly, but the tendency of long continued depression of trade is to use much less money and to throw the money you have into the large reserves.

4857. With regard to using much less money, I find it is generally estimated that in our enormous operations only about one or two per cent. is paid in cash, the balance being settled by instruments of credit. Do you think it is so?—Yes, but you require to hold in the Bank of England, and other centres, an adequate supply of bullion, otherwise the whole commercial fabric would topple down some day. I think we hold too small reserves in this country for the amount of business we do.

4858. With regard to the very heavy losses you referred to in manufacturing. In stating that the fall was 40 per cent., I suppose you took into your estimate the fall in the raw material, and calculated what the fall had been in respect to the manufactured article?—No, this is the calculation that I made. The exports of this country were 212,000,000*l.* last year; the quantity had increased so much that, if valued at the rates that prevailed in 1873, it would have been 360,000,000*l.* That shows an average fall of 40 per cent. in the commodities exported from this country, and the fall is about the same in the commodities imported into this country, they have also fallen about 40 per cent. too.

4859. (*Mr. Chamberlain.*) Since when do you estimate that that fall has arisen?—Well, it has been spread gradually over from 1873 to 1886, which was the last year of the whole series. The scale of prices last year, 1886, was the lowest, with one exception, for 100 years. We have come back to the prices of 1849.

4860. Now, do you think that low prices are in themselves an evil?—I do not think you can say that low prices in themselves are either a good or an evil; you have to take them in relation to the previous state of contracts, and obligations, and charges. I think low prices are a great evil coming after a period of high prices, a long continued period of high prices, when all sorts of obligations have been contracted upon the basis of the high prices, then, I think, a fall to a very much lower standard of prices upsets all relations of society.

4861. That means that a disturbance in prices, involving a disturbance in obligations, is an evil?—Yes.

4862. But not that low prices are an evil to the persons who have to pay them?—If you limit it to the persons who have to pay them, and exclude the

persons who have to sell at the low prices, perhaps what you say may be true, but you cannot separate the one from the other.

4863. Take the illustration that you gave us, which was that in the 14th and 15th centuries prices were lower than at any other time in our history. Are you aware that Thorold Rogers and Stuart Mill, and other economists, contend that the general condition of the people in the 14th and 15th centuries was much better than it was subsequently in the 16th and 17th centuries, when prices went up?—I think that applies to a particular period in English history, when the population had been immensely reduced by the "black death," and when there was an amplitude of living in this country for 100 years or so. I do not think it had anything to do with the scale of prices at all. I would say, speaking broadly, the worst condition that humanity ever lived in was the middle ages. I would say that the degree of misery that existed in Europe from about the 6th century down to the 14th was the greatest we know of, and that was a period of very low prices.

4864. You would admit that low prices are good for purchasers?—If their income remains the same.

4865. Then how is the good to the purchaser lost so that low prices became on the whole an evil?—I would not say that low prices in themselves are an evil. It does not very much matter what scale of prices obtains as long as it is a permanent scale, and all the obligations of society are reconciled and adapted to that scale. What I do say is a very great evil is that when you have had a customary scale of prices in the country, and heavy obligations based upon it, that that scale should suddenly and greatly be shifted. Then you bring about all sorts of social dislocations.

4866. That state of things has happened, according to your view, recently; a fall of 40 per cent. in prices has taken place in the course of 15 years. How has that affected the condition of the working classes? In the first place, I think you admit that their wages have not been reduced?—I think the general scale of wages has been very considerably reduced.

4867. Let us take the ordinary mechanic who is called a "fitter." Is it not the fact that 30 years ago his average rate of wages was 28*s.* a week?—I could not answer the question.

4868. Do you know that his average rate of wages now is at least 32*s.* a week?—It may be so, for all I know.

4869. And with regard to that very large class which represents hundreds of thousands of workpeople who depend upon engineering and similar work, wages have increased in the last 30 years?—My impression is that there is no large class of operatives amongst which wages have increased. I think that they have largely decreased since 1873 amongst the great body of the operatives as far as my experience goes.

4870. I said 30 years?—Wages rose enormously from 1850 to 1873. I have gone over a great many tables as to the average wages in manufacturing districts between the period of 1840 to 1850, and the period from 1870 onwards, and I should think prices on the average rose 50 per cent., but I should say wages have fallen on the average, taking all the employments all the country round, I should say wages must have fallen on the average somewhere about 20 per cent. since 1873. Of course I am speaking very widely and loosely.

4871. I can only put it, however, to you as far as your knowledge goes. I take this class of "fitters." Is it a fact that their wages, the wages of engineering mechanics, have fallen 20 per cent. or even 10 per cent. since 1873?—I think it is quite possible that there are several skilled branches of labour in which wages have not fallen at all, and a few in which they have risen.

4872. Take the case of masons and builders; have their wages fallen 10 per cent. since 1873?—I could not say, but they have had an immense amount of short time. The average earnings are really what we have to deal with.

4873. Then take the case of agricultural labourers, not skilled labourers; have their wages fallen 10 per cent. since 1873?—I have a very good reply to that. I have a statement here, prepared by one of the largest estate agents in England, in reply to a number of queries I put to him as to the condition of the agricultural classes. Mr. Squarey has taken great pains to make up this statement as to the fall in all the different departments of agricultural life, and he puts the average fall in wages at 20 to 30 per cent. since 1873.

4874. Well, take the average according to your estimate of a 20 per cent. fall?—It is more a guess than an estimate that; I would hardly call it an estimate. I know something of the average wages of operatives in the cotton districts. I think the fall there is not more than perhaps 10 per cent.

4875. But assuming, for the sake of argument, that it would be a fair estimate all through to take the fall in wages at 20 per cent., inasmuch as the fall in prices has been 40 per cent., the labouring classes have benefited by the fall to the extent of 20 per cent.?—That would only be the case if they had constant employment and full earnings. Now, my belief is that, for the last 10 or 12 years, there have been very few trades indeed in which the labouring classes have been fully employed. There have been very long periods of short time, frequent strikes, and great social suffering.

4876. You are not aware then that inquiries have been made, which have shown that the total sum of wages paid has not diminished?—That may be so, of course. The population of the country has increased since 1873 by 4,000,000 or 5,000,000.

4877. But any change due to the increase of the population would be rather outside our present inquiry, which is how far changes have been caused by the depreciation in prices?—No, but I thought you were speaking of the total amount of wages paid. The total amount ought to have been steadily increasing along with the increase of population in a healthy state of trade.

4878. But your impression is that there has been a great want of employment. What I want to suggest to you is, that so far as there has been any want of employment, it is due entirely to the increase of the population, and not to any lack of the amount of employment which existed previous to 1873?—My impression is that trade in all its branches has been very slack and very unprofitable since about 1876. It began to tell upon labour about 1878, and I think, from 1878 on to 1886, the average employment was much less regular than it was in the previous 10 years, and the total earnings of the men were much less. I think that this is in accordance with the statements of all the great trade unions whose reports I have been in the habit of reading from year to year.

4879. There are two points which are quite separate, and which I want to keep separate for the moment. The first is whether trade has been profitable or not; the second is whether it has been equal in volume. Now I am dealing absolutely with the volume of trade. Of course you are aware that the traffic returns of the railways show a continuous increase?—I think the rate of increase has been considerably less of late years.

4880. But I am talking of the coal traffic. I put it to you that up to last year, at all events, there has been a continual increase in the coal traffic of all the railways together. 1883 was the highest ever attained, 225,000,000 of tons of the weight of goods and minerals conveyed. In 1884 there was a slight falling off to 219,000,000, and in 1885 it was 218,000,000. So that practically there has been no falling off from the very highest. If you go back to 1873, which, I think, is your date, the total weight then was only 162,000,000?—Yes, but how much has the mileage increased?

4881. The total increase there is 45 per cent. between 1873 and 1885. Well, now, I understand your

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argument is that the appreciation of gold affects trade injuriously, but the only illustration you have given of it is the case of the smaller manufacturers, who cannot bear the loss of their capital caused by the fall of prices, and who are cleared out of the way?—No, I think I gave many more illustrations than that. I think the effect of a steady long-continued fall of prices upon the trading classes is a general impoverishing of all, great and small, and the extinction of the weaker class who have not had reserve capital of their own.

4882. And the extinction takes place because their original capital is reduced in value by the fall in prices?—Yes.

4883. Is not that fall in prices always gradual? It has been gradual since 1873, has it not?—It has been in some periods quicker than others. It has not been a continuous fall; it has been met by counter eddies, but the general tendency has been downwards all the time.

4884. And as it affects the raw material as well as the production, is not the manufacturer able to guard himself against serious loss?—Not fully. All men have to take certain risks, more or less; the custom is to hold stock.

4885. But in a falling market the tendency is for a business man to reduce his stock?—After the losses have been made. The first heavy fall of silver caused enormous loss, because people were caught with very large stocks, and goods are mostly sold in the Eastern markets on credit. Our trade is largely with silver-using countries and on credit, and we were suddenly caught when we had immense outstanding credits with those silver-using countries, and enormous loss fell on the mercantile classes and on the manufacturing classes who are shippers of their own goods in consequence of that.

4886. I am not denying that there is a loss, but I mean the loss would not be all that would appear from the total fall in prices?—I think the total fall in prices was spread over the existing stock, and has been realised at some time or another by some one or another.

4887. Then to the extent to which the smaller traders were extinguished the larger traders would gain, would they not?—No, the larger traders suffered very much also.

4888. Yes, but they would gain by the absence of subsequent competition?—No, that has not been my experience of business. I think the general profitableness was exceedingly reduced all round, and the weaker class went to the wall, and the stronger class struggled on with an impaired constitution.

4889. But surely the extinction of the weaker class, *pro tanto*, is an advantage to those able to hold on?—But when a firm fails, the manufacturing plant is bought up at a much lower price and set agoing by some one else; the trade is not extinguished.

4890. The loss is an individual loss, and not a loss to the country?—I think it is a loss to the country when a large class of people become impoverished who were formerly well to do.

4891. But your view is that, on the whole, taking large and small traders together, the profits of trade have been reduced from 8 per cent. to 4 per cent.?—Well, that is hardly an estimate. I would put it this way, that whereas in times of prosperous trade, such as we had prior to 1873, you might reasonably have said that, in most branches of trade that were vigorously and well conducted, there ought to be a profit of 8 per cent. on the average of the working capital, and if the ordinary rate of interest was 4 per cent., then there was an inducement to borrow capital, because the person borrowing it would pay the 4 per cent. and have another 4 per cent. profit to himself. That has pretty much disappeared since then.

4892. Your view, therefore, is an estimate, of course, that the profits have been reduced from 8 per cent. to 4 per cent., which is a fall of 50 per cent.?—I think it is exceedingly likely, if we had any real means of assessing the profits upon mercantile trade from 1876 to 1886, that we would find the average profit on capital not to be more than one-half what it was in the previous 10 years.

4893. Then how do you account for it that that does not appear in the returns of Schedule D.?—I cannot fully account for that. I have often puzzled over it. I should think that probably a large part of Schedule D. may come from interest on lent capital. I do not know whether that is so or not.

4894. One can understand if the fall in profit had been a mere 5 per cent., or something of that sort, that it might not appear in the returns; but if your impression is anything like accurate that there has been a fall of 50 per cent. it must appear in those returns. It is impossible to suppose that those returns would have continued to increase in the face of a reduction of 50 per cent. in the total amount?—Yes, because I think a very large part of the commercial profit of England now goes simply in payment of interest upon borrowed capital, a very large part of it.

4895. A larger proportion may, but not more in amount than before 1876?—I could not say. I think a much larger proportion of the trade of this country is now carried on by borrowed capital than was the case 10 or 15 years ago. I have asked myself the same question as you ask me now a hundred times, and it has been to me a perfect puzzle how the income tax returns keep up, because, from my experience of the cotton trade, a pretty wide one, I should certainly say that the great mass of that trade has been carried on at an exceedingly small profit since about 1874, so small in some years as to be hardly perceptible at all. I have compared notes with many of the largest people in the trade, and I have found no difference of opinion on the subject. I have got the returns of many companies, and the returns of private individuals as well, and that is the result of my experience.

4896. Do you not find that people are very ready to confess to bad trade, and they are not very willing to confess to good trade, or very large profits?—Well, after allowing for all that which my business experience has taught me as it has taught you, after making every discount and allowance, my opinion is that the capital employed in the cotton trade of Lancashire has returned very much less profit during the last 10 years than it did the previous 10 years.

4897. But are you judging entirely from one trade? It may be the case in regard to the cotton trade, and yet any deficiency in the cotton trade may have been more than made up by the other trades in the country?—Well, I am speaking of it now, but I think you would get the same information from all persons largely concerned in the iron trade, the coal trade, and the shipping trade, and, indeed, in most trades of the country. That is my impression.

4898. But I ask you whether the only adequate explanation of the income tax returns is not that the total amount of the profits of the trade of the country must have continued as large as ever, although the proportion of profit upon the returns may be less than it was, and, in fact, whether the whole tendency of modern business has not been to get larger returns with a smaller proportion of profit, the actual profit being, perhaps, the same?—I think there is one particular branch of trade that has benefited; that is the distributing trade. A very great fall in the wholesale prices has benefited the distributing trades because the retail prices have not fallen in the same proportion, and they have got a good portion of the profit. These retail prices have not fallen 40 per cent. Wholesale prices last year had fallen 40 per cent., and the whole class of retailers have, I think, done well.

4899. What I want to put to you is, that while your impression is that this appreciation of gold has been unfavourable to trade, you do not find any trace of the depression in the official returns?—I think you do find a very considerable trace of it. Look at Mr. Goschen's budget speech for instance. I will just quote a few of his figures, showing the extreme want of elasticity in the revenue of late years, as an example.

4900. Of course we admit that the elasticity is not so great, that is to say, the revenue does not come up by leaps and bounds, but it remains at a higher level; the income tax is at a higher level now, certainly, than it was in 1873, very much higher?—Yes, but the remarkable point is that from 1870 to 1875 it increased at the rate of 25 per cent., while for the last five years, allowing for increase of population, it has been stationary.

4901. In that case the only evil you would point would be a failure continually to increase, but not any positive reduction in the profit or volume of trade?—But I think that of itself is a very noticeable feature.

4902. But do you confine your argument to that?—No, I do not confine it, but I say that is a very notable point, because in other countries I imagine there has been very great progress during the last few years. In the United States there has been great progress; in this country we have had a cessation of progress.

4903. (*The Chairman.*) In the United States I thought they had been suffering from low prices?—The general trade has improved considerably. It went down very much in 1880, and is recovering again now; is that the case?

4904. (*Mr. Houldsworth.*) Is it not the case that in Schedule D. the incomes returned from foreign investments are included, and will not that possibly form an explanation to some extent?—Possibly.

4905. (*Mr. Chamberlain.*) The gross amount of property and profits under Schedule D. from 1870 to 1874, which is the period you take as the favourable period, was 210,000,000*l.*, in the last period from 1880 to 1884 it was 268,000,000*l.* That is to say, it has increased 25 per cent. during the time in which you estimate that profits at home have diminished 50 per cent.?—I did not say profits at home, I said the portion of profit represented by capital of those engaged in trade I thought was very much less, but the portion of profit represented by the hire of capital probably remains as great as ever.

4906. Very well, but in the time in which you estimate that reduction of 50 per cent. upon the capital engaged in trade, the returns of the income tax under Schedule D. have increased by 25 per cent.?—In reply to that I will quote what Mr. Goschen said, which does not in the least correspond with that. He said, "Under Schedule D., containing, as it does, "the profits of trade and business, in 1869 the "assessment was 161,000,000*l.*, while in 1876 it was "242,000,000*l.*, being a jump of 80,000,000*l.* in seven "years. But from 1876 to 1886 it only rose from "242,000,000*l.* to 247,000,000*l.*, being an increase of "only 5,000,000*l.* in 10 years. I wish the Committee "to grasp the full significance of these figures. While "in the earlier period there was this gigantic increase "in the revenue of the country, the turn came in "1876, and since then there has been only an "aggregate increase of 5,000,0000*l.* in 10 years."

4907. That is to say, the increase has been at a much less rapid rate, but still there has been an increase?—A much less increase than of population

4908. But I put it to you that any increase at all is inconsistent with your view that there has been a very considerable decrease in the most important item of it?—I admit I cannot fully understand it. I have thought over this for many years. One partial explanation I would give is this. I think the income tax is collected now very much more rigidly than it was 20 years ago. I am speaking from facts within my own knowledge when I say that, in the early years of income tax, a large amount of income evaded paying income tax, and I have known of incomes which paid only for one-fifth or thereabouts of their amount, whereas of late years I have known cases where people have paid considerably over their income. Assessments have risen higher and higher until people think they are assessed beyond their income. I would not be surprised if that accounts for an enormous sum if it can be worked out.

4909. I want to turn for one moment to the other evil which you consider arises from the appreciation of gold, that is, the effect of the burden of fixed contracts payable in gold. I understand that that is an injury only to one class, the class of debtors as compared with creditors; it is not an injury to the country as a whole?—I think it is an injury to a very much larger class, and a class that ought always to be considered, namely, the active industrial class who are working for their living, whereas the people that benefit are, as a rule, people who do nothing at all except live upon the interest of their capital.

4910. You think the debtors are a more deserving class of people than the creditors?—I think the industrial class actively engaged earning their living ought to be more considered than the idle class who already have more riches than is good for them.

4911. But I am right in saying that whatever weight may be attached to that it is not an evil to the country as a whole, but to one class of the population as compared with another class of the population?—Well, my reply to that is that I think all unjust transference of wealth from one portion of the community to another is an evil to the country as a whole.

4912. I will change the word and say, not that it is not an evil, but that it is not a pecuniary loss to the country; it is a pecuniary loss to a class of debtors as compared to a class of creditors?—Well, I will give a strong illustration of what I mean; not a very happy one you will think, but it brings out what I mean. Why is thieving a loss to a community? The community is not poorer on account of the money stolen, it is only transferred from one man's pocket to another's, therefore you might argue that it is no disadvantage to a country to have a class of thieves who live by plunder, but all communities think it is a very great disadvantage. I do not wish to infer the analogy is complete, but I say that any unjust transfer of wealth by means of law from one class of people to another is a great injury to a country, especially when the transfer is made from the poorer to the richer class.

4913. Now, I want to consider the case of these two classes. You put the debtor as above the creditor, but is not the creditor a person who by industry and frugality has collected the capital which he lends to the debtor?—I would say that, speaking broadly, the large capitalists represent reservoirs of capital which have been accumulated for centuries. These reservoirs are used all over the country amongst the multitude of small traders. These traders are the brains of the country; they carry on the trade of the country; their enterprise develops the country, and upon them hang for sustenance the great mass of the labouring class. I say it is much more for the good of the country to have the trading community prosper, which means prosperity to the vast mass of those who hang upon them than it is to add to the already excessive riches of a small class of capitalists.

4914. But you propose by legislation to transfer from one class a part of their property for the benefit of another class?—No, I do not accept that as a fair statement. I say unjust legislation has added to the weight of debts in all countries having a gold currency; unjust legislation has benefitted the capitalist class at the expense of the vast mass of the community. I wish, then, legislation to undo the wrong that has been done, and place us where we stood before silver was demonetised.

4915. (*Chairman.*) Do you think that the bulk of the money which has been invested in industrial occupations, by way of loans or otherwise, by those who are not carrying them on has been mainly from the resources of a few or a considerable number of wealthy capitalists? Has not the bulk of it come from the pockets of persons of small means?—I should think not. I should think that the loanable capital in this country, speaking broadly, mainly belongs to the capitalist class.

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4916. (*Mr. Chamberlain.*) But you take the bankers of the city of London as the type of that capitalist class. Are not their deposits made up of enormous numbers of very small sums from frugal people, who put them there for safety? No doubt the capitalist class includes, for instance, the savings banks, which includes over 80,000,000*l.*, so that you can hardly anywhere draw an exact line between a class that are creditors and a class that are debtors, and a class of capitalists and a class who are not. You may say all the traders are capitalists up to the extent of the money that is employed in their own business, but in addition to that they employ borrowed capital, and that is drawn from the class which do not work at business themselves?——

4917. (*Mr. Courtney.*) Take the case of the landowners, who are, as you say, very greatly indebted. Is it not the fact that a very large portion of their mortgages are held by insurance companies, who represent the savings of the most frugal and industrial classes?—No doubt they are, but I say it is a very hard thing for a man who has inherited an estate worth 10,000*l.* a year, subject to burdens of 5,000*l.* a year, owing to fall of prices and depression of trade, his rental falls to 5,000*l.* a year, and he finds himself without any income at all, and subject to the same burdens which he was before. These burdens absorb now a far greater share of the value of the land than they did before.

4918. (*Mr. Chamberlain.*) That is an individual case and quite a different case. Your general proposition was this, that you thought that it would be a good thing to benefit the debtor (the industrious trading community) at the expense of the capitalist who lends him the money. What I put to you is, that in very many cases the debtor is an unthrifty and profuse person, whereas the capitalist is really the frugal and thrifty person?—There may be some instances of that kind, but I should say the opposite is the usual case. I think the trading class who employ capital are for the most part the thrifty, industrious, hard-working part of the community, and that those who live upon the interest of their money are for the most part the least industrious and the least frugal part of the community. Of course there are exceptions, but I think that is the rule.

4919. But the people whose capital is advanced to the traders of the country are not necessarily people who live on the interest of their capital alone, are they?—Not necessarily.

4920. The capital advanced is made up of the savings of an infinite number of persons?—I would think that a large part of the capital advanced belongs to rich people who simply live on the interest of their money.

4921. Are you a bank director?—No.

4922. Do you know anything about the proportion of small deposits in the banks?—Well, I am pretty familiar with the Scotch deposits which amount to 60,000,000*l.*, and know the class from whom they are drawn.

4923. Is not a large proportion of that 60,000,000*l.* made up of small deposits from small people?—No doubt it is.

4924. Who are not large capitalists living upon the interest of their money?—But the bulk of these very small people would benefit by the change that I have recommended.

4925. That is a different argument. I must press you on your particular argument which was that it was an expedient thing to benefit this debtor class at the expense of the capitalist class, because the capitalist class were large property owners living upon the interest of their capital. What I put to you is that the capitalist class to which you refer really consists to a large degree of very small capitalists, who do not live exclusively upon the interest of their savings?—Still, the owners of the ground rents of London are in the main a very wealthy class of persons. They belong to that class which are benefitted just now. The fund owners, not a very large class, are also benefitted by the present state of things. The holders of mortgages and annuities of all kinds are very largely of the same class of people as the holders of ground rents. They are mostly people who are not actively engaged in business, and if you were to contrast what is good for them with what is good for the far larger class of people who are struggling on, doing the business of the country with great expenditure of brain and anxiety, I think I would consider the struggling and active class rather than the other class, but I do not mean by saying that that I would be doing an injustice to the one or the other. What I say is this: Changes of the law have taken place which have been a great injustice to the debtor class, for the benefit of the creditor class. Those changes were not done for that purpose. The effect of them was not foreseen at the time, but it is almost universally understood that they have had that effect. All I want is to restore fairness and justice as between two classes of the community.

4926. I have only one other question to ask you. Is not England as compared with other countries a creditor country?—Yes.

4927. On balance it is very largely creditor?—Yes of course, that is true.

4928. And therefore any alteration such as you propose would injure England as a creditor nation to the advantage of the debtor nations?—So far as England holds gold bearing securities, and only so far England also holds a great deal of silver annuities in regard to which she is losing. For instance, she is holding all the capital by which the Indian railways have been made.

4929. And why does she lose there?—The Indian debt is paid in silver.

4930. (*Mr. Barbour.*) What is raised in India is paid in silver?—But there is a large amount of silver annuities held here. I have always understood that we held about 100,000,000*l.* of Indian securities in this country.

4931. About 20,000,000*l.*, I think, speaking roughly?—Then the balance is held in India, but by English people.

4932. (*Mr. Chamberlain.*) I do not think that very much matters; the balance is very largely in favour of England as a creditor nation for gold?—Yes, I quite admit that, but I would also wish to call attention to this fact. It is commonly held that English investments abroad are almost entirely in gold paying securities. Well, I have travelled a good deal abroad and made inquiries in o this subject, and the conviction has grown upon me that we have a much larger amount of capital invested in real estate, and plant, and trading operations of various kinds, the interest of which comes to us perfectly apart from the currency of the country; much of it is in fact in countries having inconvertible paper currencies, and that is the portion of our capital which is increasing, and from which the interest comes to us perfectly irrespective of the standard in which the interest is paid.

4933. (*Mr. Houldsworth.*) If the effect produced upon the debtor, or what you call the industrial class, is as you have described, will not that evil ultimately affect the creditor in the rate of interest that he would be able to get for his capital?—No doubt, the rate of interest is steadily going down, owing to the extreme unprofitableness of trade, and the interest of all good security is very much lower.

4934. So that it will not be ultimately a question between two classes, it will be that both classes ultimately will suffer?—Well, I think so in the main. I think wherever a great wrong is done to any large class of the community it ultimately diffuses itself over the whole community.

4935. (*Mr. Barbour.*) Do you not think that it would be a suicidal policy for a country to permit the appreciation of its own standard because on the balance of its foreign obligations it might be a creditor?—I think it would be an exceeding great wrong done to a far larger class of persons from whom

I have made a computation that the amount of interest payable in this country in gold is not less than 150,000,000*l.* sterling a year, probably it is very much more than 150,000,000*l.* sterling, and I think, to add to the weight of all this in order that England may benefit upon 30,000,000*l.*, payable to us by foreign countries, whose gold securities we hold, would be a suicidal mistake.

4936. (*Mr. Chaplin.*) I understand you to say that the fact that the income tax returns have not fallen off is partly accounted for by increased stringency in collection?—I think so.

4937. May there not be other reasons to account for the same thing. Take for instance the case of farmers. They are assessed upon their rents at present, and not upon their profits?—Yes, quite.

4938. You have been asked a good deal about the classes of creditor and debtor. I want to put the question to you in another way. I understand your contention is this, that the adoption of the bi-metallic system would be to raise the price of all commodities to some extent?—In gold using countries.

4939. You include the labouring classes, I presume, because they have a commodity to sell, and that is their labour?—Yes, I think the effect would be to cause a rise in wages.

4940. Then it comes to this, that the owners or producers of all kinds of commodities, including the working classes, to that extent would be the gainers?—I think so.

4941. On the other hand, I understand you to admit that the holders of gold bearing securities might to some extent be injured?—To some extent; that is to say, their money would not go quite so far in purchasing.

4942. Even supposing they are injured or were injured, they would only be injured to this extent, I understand from your argument that they would lose only what they had gained and what their creditors had lost by the legislation which demonetised silver in 1873, 1874?—Certainly.

4943. It comes to this, does it not, that it really is a question between the interest of the owners of gold or gold bearing securities on the one hand, and the owners of all other kinds of commodities including the labour of the working classes upon the other?—Pretty much that.

4944. You would contend that the latter class is infinitely the more numerous?—Certainly.

4945. In reference to what you said as to the fixed burdens, you estimated them in round numbers, I think, at 200,000,000*l.*?—Well, at 150,000,000*l.* in the pamphlet that I published, but I think they are a good deal more than that probably.

4946. Could you tell me what proportion of the annual income of the country that amounts to?—Well, the income of the country is very difficult to arrive at, and there are many different ways of computing it. If you add together the income of all individual persons in the country it is supposed to aggregate 1,200,000,000*l.* sterling, but much of that income is counted over several times, and does not form a part of the net income of the country. I doubt if the net income of the country is anything approaching that.

4947. Could you give an estimate of your own?—Well, I used to think about 1,000,000,000*l.*, but I am almost inclined to think that 800,000,000*l.* would be nearer the mark, when you allow for the immense decrease in the price of everything. I mean the net annual production of wealth.

4948. Then I am to understand that you would estimate the fixed burdens of the country as amounting to something approaching to one quarter of the net annual income?—Something approaching one quarter of the net annual production of wealth. I would rather put it that way.

4949. Well, now, you stated that the first fall in silver occasioned an enormous loss. What is your opinion as to the future of silver? Supposing that no legislation is adopted, is the value of silver likely to remain stationary, or to improve, or to fall further than it has done at present?—Well, my impression is that the same causes which have caused the last fall, the fall of 25 per cent. compared with gold, will produce another fall equally great in the course of the next 10 or 20 years, provided that there is no step taken by the nations of the world towards the re-monetisation of silver.

4950. What did you estimate the fall at which has occurred already?—Well, it is rather more than 25 per cent. compared with gold, for silver used to be 60*d.* an ounce; now it is 43½*d.* per ounce.

4951. Then I am to understand that if no measures are taken to prevent it, you estimate a further fall of 25 per cent. in the value of silver?—I think it is very likely that this will occur in the next 10 or 20 years if we are going on as we are doing now.

4952. To that extent, therefore, the fixed burdens of the country, the weight would be proportionately increased?—Quite so.

4953. Would not that become a very serious question?—I think so. That is one of the main reasons why I feel so deeply interested in this question, for I see that there is no finality to it. We are upon an inclined plane; we cannot stand where we are. Silver must either be used as money along with gold, or it will increasingly cease to be used altogether as money.

4954. In fact, then, your argument would lead to this, that if the price of silver in the future continues to fall, the margin between the net annual income of the country and the fixed burdens would become dangerously small?—I think so. I think the pressure upon all the weaker classes of the country would get stronger and stronger, leading to socialistic outbreaks at last.

4955. In fact it would become a great additional inducement to repudiation on the part of those who have contemplated such a thing?—No doubt of it.

4956. (*Sir John Lubbock.*) You said, if I heard you correctly, that if the silver fell 25 per cent. the weight of the fixed burdens of the country would be raised 25 per cent.?—I will explain what I mean, silver and gold used to be linked together by the French ratio of 15½ to 1, which kept silver in London at about 60*d.* an ounce. The amount of money in the world was about equally divided between gold and silver, speaking roughly, each performing about the same amount of work. Well, since then, silver has fallen in value as compared with gold fully 25 per cent., the effect of which has been to diminish prices in gold countries 12½ per cent. and to raise prices in silver countries 12½ per cent. from that cause alone. I am not speaking of the many other causes which have contributed to changes in price, but that change in the valuation of the two metals has had the effect of lowering gold prices 12½ per cent. and raising silver prices 12½ per cent. If another fall of silver of 25 per cent. compared with gold takes place it will just repeat that process; it will double those changes, another 12½ per cent. will be taken off prices in gold countries and 12½ per cent. added to the prices in silver countries. That would be the natural effec of it.

4957. Then do I understand you to contend that any fall in the price of silver would necessarily affect to the same extent all other commodities, because that is what you are contending now, is it not?—I think a fall in silver means a rise in gold. The two are convertible; it means the same thing. I will put it this way; silver and gold may be compared to a horizontal bar of which one half was gold and another half was silver. The beam was horizontal up to 1873 at the fixed ratio of 15½ to 1. One half of it is gold and the other half of it is silver. Well, since 1873, the gold end has risen and the silver end has fallen just exactly the same degree, and you may describe that either as a rise of gold or a fall of silver as you choose. Well, supposing another fall of 25 per cent. occurs, this is what will happen, the beam will be turned still more up.

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4958. (*Chairman.*) But I thought in 1873 they ceased to be a horizontal bar fastened together, and became detached, so that they were not tied in the same way as before?—No, they are not tied together. The one has fallen in relation to the other 25 per cent., and I am giving you a rough material illustration of how it operates.

4959. (*Mr. Chaplin.*) Let me ask you a question upon another point in connexion with the evidence you have already given. You told us, I think, that the classes who had suffered most from the present state of things were the industrial classes of the country?—Yes.

4960. And you illustrated that by the short time and the lowered wages at which the artizan classes in the towns were engaged?—Yes.

4961. Can you tell us anything as to the effect that it has had upon the wages of the working classes of the country, that is the agricultural labourers?—Well, I am not so good a judge upon that point. You yourself know much more than I do, but Mr. Squarey, who has collected for me a great deal of information on the subject, puts the decline in agricultural wages at 20 or 30 per cent. Mr. Chamberlain quoted the wages of engine fitters, which had increased since 1873. Well, that represents one of the scientific forms of labour. Now I wish to point this out, that there has been a great change of late years in the remuneration of the more scientific forms of labour and the commoner forms of labour; the more scientific forms having a tendency to grow higher and higher in their reward. They represent a very small class in the community. I doubt if they represent 5 per cent. of the labour of the country, but they are frequently quoted as an instance of the rise of wages. On the other hand, the unskilled labour, which is a very large class, has greatly deteriorated of late years. The unskilled labour accumulates in our large towns, and it has been miserably employed and half starved, as far as my experience goes, over the last 10 years.

4962. (*Mr. Barbour.*) Is it the case that the efficiency of these skilled labourers is increased?—Undoubtedly.

4963. But, being more efficient, they would naturally get higher wages?—For instance, they will mind four looms in place of three, and such like things.

4964. (*Mr. Chaplin.*) I would only ask you one further question on the subject of the agricultural wages, and that is, whether your own knowlege of the state of things in some of the eastern counties in England would not bear out exactly what Mr. Squarey has told you that they had fallen about 30 per cent?—I have not a sufficiently minute knowledge of the agricultural districts to speak much from my own knowledge. Of course, I know of the immense influx into the towns of agricultural labourers. They have decreased in number about 400,000 in the last 20 years. Most of those have gone to the towns swelling the class of unskilled labour who are so very ill off.

4965. A question is sometimes asked whether the fall in wages which has occurred, supposing that it has occurred, is not more than compensated by the fall in the price of commodities. What is your opinion upon that point?—Well, I think that certain classes of labour by means of trade combinations have kept their position, and perhaps, on the whole, rather improved it; but I think the bulk of labour has suffered very considerably, not so much from the fall of wages as from the very large amount of short time, and, indeed, from the absence of employment; but I would likewise like to observe that this last year there has been an improvement, and those features are not so prominent now as they were a year ago.

4966. In fact, what I understand you to mean is this, that not only has there been a fall of wages, and not only are a great number of them employed at short time, but that a large number besides are out of employment altogether?—That has been the case the last 10 years. We have had a very large amount of unemployed labour in all our large towns.

4967. You stated that there had been a great fall in the value of agricultural land caused by the fall in prices?—Certainly.

4968. And this was owing, you said, partly to the appreciation of gold and partly to improved means of transport and new markets opened, from which the agricultural interest in England had suffered from an increased competition. What proportion of that fall do you attribute to appreciation, and what proportion to those other causes?—Well, it is mere guess work, but I venture to assume all through this argument that one-half the fall is owing to appreciation and one-half to other causes.

4969. And the effect of this is specially felt by the agricultural interest in the wheat importations from India?—Yes.

4970. Did I understand you rightly to say that the price of wheat depended in great measure upon the value of the rupee?—Certainly.

4971. That if the rupee was worth 2*s.*, wheat would be at 40*s.*?—The Indian producer could not afford to lay it down here at less than 40*s.*

4972. And that if, under any circumstances, the rupee fell to the value of 1*s.*, the price of wheat might be lowered to 20*s.*?—I think so. I think the Indian producer could lay it down here at 20*s.*

4973. What is the present value of the rupee at this moment?—1*s.* 4¾*d.*

4974. And the price of wheat, I suppose, averages about 30*s.*?—Well, it was to within a few weeks ago. There has been a slight rise lately.

4975. You were asked some questions just now as to whether low prices were or were not an evil in themselves. Supposing that agricultural prices, in consequence of the present state of things, were to fall so low as practically to put a large portion of this country—of the eastern counties in particular—out of cultivation altogether, would not that be a great evil to the community at large?—I think it would be a great evil.

4976. How would that affect the agricultural labourers in the counties?—Undoubtedly lower the level of agricultural labour everywhere all over the country, and drive it into the towns.

4977. It would put a large proportion of them out of employment altogether, and drive them into the towns?—Certainly.

4978. Supposing any appreciable portion of the country was put out of cultivation by these means, would not that have a very injurious effect upon the market for the manufacturers of English goods?—There is no doubt that one cause of the depression of trade the last few years has been the great decay of the agricultural market for goods. As Sir James Caird has pointed out, there is 40,000,000*l.* sterling less spendable income amongst the agricultural classes than there was a few years ago. That means a decrease of 40,000,000*l.* in what they are able to purchase from the manufacturing classes.

4979. (*Chairman.*) Do you take 40,000,000*l.* less spending power; is that after providing themselves with the necessaries in the way of food?—I think he meant their entire income was 40,000,000*l.* sterling less than it was during the prosperous times.

4980. So that part of that would diminish their power of purchasing the necessaries of life. It would not be all taken out of the money that otherwise would be spent on manufactures?—No, it would apply to everything a man purchases.

4981. (*Mr. Chaplin.*) And to remedy this state of things, what I understand you to suggest is the adoption of the bi-metallic system by this country?—In conjunction with other countries.

4982. With how many?—Well, I think it ought to be in conjunction with France, the United States, and Germany. These are the only great countries in the world having metallic money. They virtually mean the world so far as metallic money is concerned.

4983. In your opinion would it be unwise to adopt it without the conjunction of all the three countries?

—I think we could carry it on perfectly well without Germany, but I think it would be desirable to have Germany.

4984. And the general effect of that system, or at all events one effect of that system, if it was adopted, would be in your opinion to a certain extent to raise prices?—In gold using countries, and still more to prevent a further fall which I think is imminent if nothing can be done to stop it.

4985. And the second effect would be to give a general stability in the relation of the values of the two metals?—Quite so.

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Witness withdrew.

Adjourned till Monday.

Twenty-first Day.

Monday, May 16th, 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. HENRY CHAPLIN, M.P.
MR. L. COURTNEY, M.P.
SIR T. H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.

MR. GEO. H. MURRAY, *Secretary*.

Mr. DAVID MCLEAN was called and examined.

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4986. (*The Chairman.*) You are manager of the Hong Kong and Shanghai Banking Corporation?—Yes.

4987. That is a bank carrying on business in this country and also in China, I believe?—In China, India, and Japan.

4988. So that you have had experience of the financial arrangements carried on through banks relating to the trade between this country and China and this country and India?—Yes.

4989. Both as regards the export trade from this country to those countries and the import trade from those countries to this country?—Yes.

4990. It may be convenient to consider separately the banking transactions in relation to the export trade and the import trade. Will you first explain to the Commission the mode in which merchants exporting to China are in the habit of making their financial arrangements through the banks here?—The merchants apply to the banks for a rate of exchange, and very often they get an offer of that rate for two or three days, sometimes a week.

4991. Will you explain what you mean by a quotation for a rate of exchange?—For instance, the rate on China just now is 3*s*. for 60 days sight bills. They telegraph out, or they employ a broker to find out, if they can get that rate left with them for two or three days, until they can communicate with China, and if they can sell the goods out there, then they say, "We will take the amount that you have offered us."

4992. When you say the rate for 60 days sight bills, you mean that you will buy a bill on China at 60 days sight at that rate?—Yes.

4993. Is 60 days sight the usual course current between here and China?—Yes.

4994. Then having ascertained from you that you would buy his bill on China at that rate, he then communicates with China to see whether he can dispose of the goods?—Yes.

4995. Having ascertained that he can, he then draws a bill and sells it to you at the quoted rate?—Yes.

4996. So that when he has carried through that transaction any subsequent fall in the price of silver would not affect him so far as the payment of the goods is concerned?—No, it would not affect him.

4997. Now, the bank in that case, unless it could enter into some other transaction, would run a risk?—Yes.

4998. Does the bank cover itself from risk by entering into, what I may call, a reverse transaction?—Yes, the moment we have concluded the operation here we wire out to China that we have done so, after we had got a certain amount done, and then they try to buy bills forward and cover the transaction, so as to make us safe.

4999. That is to say, bills of China on this country?—Yes.

5000. So that if they bought a bill—I am putting a hypothetical case—for exactly the same amount the bank would run no risk?—No risk.

5001. Because whatever fluctuations there were on the one bill there would be on the other, and each would balance the other?—Yes.

5002. Now, as a rule, are banks able to cover themselves on the sum total of their transactions of that description?—Not easily with China. It is very difficult to do so with China. It is much more easy to do so with India.

5003. I should like to keep China and India apart. There are special difficulties in the case of each. In the case of China the opposite currents of trade are not so constant?—No, they are not. The way we do is this, we buy here; they buy on the spot, at the present rate of exchange, and the difference between the two rates is our interest for the time we are lying out of the money between this country and China. That is to say, for instance, we wire out that we have bought to-day at 3*s*. They immediately buy bills on the spot, we have always plenty of money and are able to do that, to buy bills at once, we do not wait for the due date of that bill before we buy it, therefore we secure our profit.

5004. But what burden is the merchant put to when he sells you his bill?—He runs no risk. The only risk he runs is the risk of the Chinaman not taking delivery of the goods.

5005. He runs no risk from any change in the rate of exchange, but he has to bear a burden in respect of remuneration to you, which he would not have to bear if the silver were not fluctuating in the manner in which it does?—Yes, exactly.

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5006. And what is the amount; can you give us any idea?—It is quite impossible.

5007. Still there would be a substantial burden on the export transactions from this country to China, a certain burden to the merchant resulting from the fluctuation of exchange?—Yes, the present rate is about 7 per cent., that is to say, we buy a bill at 3*s.*, and buying out there to cover gives us an interest of 7 per cent. per annum while we are out of the money.

5008. That is to say, the interest which he would pay would be higher in that case than if he were selling a bill to a bank here drawn upon a gold using country?—Yes.

5009. Now, suppposing that you are not, or find you are not, able to cover yourselves, I suppose you would not quote to him a rate of exchange at which you would take his bills?—We would quote a lower rate. There is always a rate that we can buy at in China, there are always bills offering; if we could not get a bill to give us a profit at 3*s.* we would probably get a bill that would pay us at 2*s.* 11$\frac{3}{4}$*d.* or 2*s.* 11*d.* We would always be able to quote a rate to him.

5010. The result of that would be that he would have to pay more?—Yes.

5011. But we have been told there were times in which a merchant could not sell forward in his transactions with China?—That is very seldom. It happened, I think, about once last year, when the excitement was very keen about the heavy fall in India.

5012. I suppose if he could not sell forward he would have to bear the risk of the fluctuation?—He probably would not do the transaction.

5013. So that in that case it would interfere, actually, with the doing of business?—Yes, quite.

5014. Supposing that a very high rate has to be charged, do you think that that hampers business also?—No, we do not find it so. The business with China, the exports from this country this year, already are larger than the last. We do not find it to interfere. It makes business more difficult, but it does not stop it.

5015. Now to deal next with the import business from China to this country, what is the practice with regard to that business?—The merchant, I presume, has got his limits for, say, tea or silk here, and if can buy there, fixing the rate of exchange at the limits that he gets from his constituent in this country, he buys, and at that rate the bills are sold to the English banks. Say, for instance, he may get an order for silk, say, at 15*s.* a pound, and he goes to the banks there and finds at what rate of exchange he can sell his bills, and then he buys the silk if he can lay it down at his limits.

5016. He makes the price for the silk at the rate at which he can buy bills?—Exactly, and the same with tea.

5017. And in that case he is subject to no risk of fluctuations?—He is not, if it is a firm order from a merchant here; but, of course, the bulk of the business is done without a firm order from this side. For instance, tea you cannot sell to arrive here.

5018. If he can sell on a firm order from this side, then having ascertained the rate at which he can sell his bills, and having fixed his price in relation to that, he would run no risk from fluctuation?—No.

5019. But if he cannot get a firm order from here, so that he has to buy to sell again here?—Then he takes the risk of this market.

5020. That is, the risk of the fluctuations of the price of silver would fall upon him?—Yes.

5021. Can he cover himself against that with the banks?—No, it is impossible.

5022. And a large amount of the business, you say, is done without firm orders from this country?—In tea. It is impossible to sell tea; quite impossible.

5023. So that as regards the import trade from China to this country, the merchant does run the risk of fluctuations of silver to a very great extent?—Yes.

5024. Do you think that hampers his trade?—No, it does not. It may make it a little more speculative.

5025. The profit that he anticipated may have disappeared in consequence of a fall in the value of silver?—If silver goes down, probably the price here varies with it.

5026. So that it would render the business much more speculative, and so far as people were disinclined to do speculative business, it might hamper it?—Yes.

5027. We will turn now to the export trade from this country to India; will you be good enough to inform the Commission, what is the practice with reference to that trade?—That is very much the same. It is the same as the China trade, only they can do a firm order business much more readily.

5028. Is the usance the same?—Yes; 30 and 60 days.

5029. Well, the merchant selling a bill to the bank, and the bank covering itself in the same way, there are more facilities for the bank covering itself in the trade between this country and India, than between this country and China?—Yes.

5030. Is the interest that the merchant has to pay consequently less?—About one per cent.; a half to one per cent. less per annum.

5031. Now, in the import trade from India to this country, does the merchant there run a risk to the same extent as he does in the import trade from China?—No, he can more readily sell to arrive here; for instance, wheat; he can telegraph home that he has bought wheat there. Probably it is sold before he buys it. As a rule it is sold before he buys it in India.

5032. So that in the case of imports from India to this country, the merchant can protect himself from fluctuations in just the same way as in the case of exports?—Yes.

5033. (*Mr. Birch.*) I think that is specially the case with regard to wheat; you can sell wheat upon sample so much better than you can tea. They would not buy tea to arrive?—No, they must see the tea.

5034. (*The Chairman.*) Then may we take it that, as regards the export trade from this country, the mode of dealing through the banks and the position of the merchants is precisely the same as in the China trade, save that the transactions between India and this country being more constant in both directions than between China and this country, the merchant can carry through the transaction at less burden to himself?—Yes.

5035. But as regards the import trade from China and India respectively, whereas as a rule from China the merchant has to bear the risk of fluctuation, from India he can, as a rule, protect himself in the same way that he can in the export trade?—Yes.

5036. (*Mr. Barbour.*) I suppose that the necessity for fixing exchange beforehand does hamper trade between the two countries?—It does; it makes business a little more difficult.

5037. And has there ever been a panic about the exchange between England and India, or England and China?—There was last year. It began in August, I think, and lasted for two or three months.

5038. And that interferes a good deal with business?—Yes, it did then.

5039. I suppose the panic arises from the fact that people do not know at what rate the exchange is about to settle?—Yes.

5040. If they knew that it would settle at or about a certain price in the course of a short time there would not be that panic?—Certainly.

5041. Do you find it very easy to forecast from time to time what the rate of exchange will be?—I am sorry to say we do not; we just work from hand to mouth.

5042. And I suppose there is a certain difficulty in always getting cover; that is an inconvenience, is it not?—It is much more easy to get cover in India than China.

5043. But it is a difficulty?—Yes.

5044. I saw in one of the financial papers some time

ago that the banks were talking of giving up the system of buying and selling forward; that they thought it was too risky and not satisfactory; is there any truth in that report?—No.

5045. Was the capital of y ur bank raised in gold or silver?—Silver.

5046. By keeping a portion of your capital in the East you do not suffer any loss from depreciation?—No, all our capital is in the East.

5047. Some of the banks have their capital raised in gold?—Nearly all of them.

5048. They would be rather afraid to keep any considerable amount in the East, in silver?—I should think they would not keep anything.

5049. They reduce the amount that is kept there as much as possible on account of the possible depreciation?—Yes.

5050. And consequently the supplies of silver, say in Calcutta and Bombay, would not stand any considerable extra demand upon them that came suddenly?—No. The banks keep no money there at all.

5051. And has the result of that been that a very slightly increased demand in Calcutta and Bombay raised the rate of interest for the time very seriously?—Yes.

5052. I believe quite recently it was as high as 10 per cent.?—9 per cent. It may have been 10 per cent. outside the bank, but the bank rate was 9 per cent.

5053. And, of course, that is an inconvenience to trade?—When you have dear money it interferes with trade.

5054. And I suppose, if people were confident that the portion of their capital in Calcutta and Bombay would not be depreciated, the supply that would be kept there would be rather larger?—Yes; they would send out money there to invest.

5055. And does the same cause that prevents the banks from keeping a larger portion of their capital in the silver countries prevent people from investing there too?—Yes, it operates in that way.

5056. (*Mr. Birch.*) I gather from what you said that the difficulty is rather in imagination than in reality for the banks, inasmuch as the export and import bills balance themselves pretty well?—Yes.

5057. And that with regard to the difficulties in dealing with China rather than with India, I suppose the Indian Government bills come in to your assistance very materially?—Yes.

5058. That is an element which you have not got in China?—No. Well, we use the Indian bills on account of China also.

5059. But not with the same facility?—No.

5060. Has your bank anything to do with countries using a forced paper currency?—No.

5761. But I suppose you would agree with me that banks dealing with a forced paper currency would have a much greater difficulty than those dealing with a silver-using currency?—Decidedly.

5062. And that, with regard to buying and selling forward, the merchant has his risks, independent of the exchange, because he may buy forward, and when the goods are delivered they may have fallen considerably from the price at which he bought. Supposing I buy wheat for future delivery at 30*s.*, it might be at 26*s.* before I got delivery of it. It is one of the mercantile risks?—Yes; but it assumes that you very likely have resold it.

5063. Of course it must be very much easier for a bank to deal with a country which has exactly the same standard, because they know that they have only got the expense of moving the metal in case the exchange goes against them?—Yes.

5064. (*Mr. Chaplin.*) I think you said that the wheat in India was often sold here in England before it was actually purchased there?—Yes, very often.

5065. Then how is the operation carried out? Is it bought by corn merchants here in England, and do they send out an offer for a certain quantity of wheat of a certain quality?—Yes, and if the offer is sufficient the wheat is shipped.

5066. Some witnesses have told us that the rate of exchange between India and England acts like an export bounty or bonus upon the wheat sent from India to England. Is that your opinion?—I think the fall in exchange has encouraged the export of wheat from India very largely.

5067. And every additional fall acts as a bonus?—Yes. For instance, in China in the last 10 years many different exports that we never heard of before, such as straw-braid, and camels' wool, are brought in owing to the fall in exchange.

5068. The rupee is worth how much in England at the present moment?—1*s.* $4\frac{25}{30}$*d.*

5069. And is it the fact that in India it retains its purchasing power of 2*s.*, or something of that sort?—Yes, I believe it does.

5070. Then is the position of the corn merchant this, that he can with 1*s.* 4*d.* of English money buy a rupee, and therefore practically buy 2*s.* worth of wheat?—No.

5071. (*Mr. Barbour.*) You say the fall in exchange has largely encouraged the export of wheat from India, in your opinion?—Yes.

5072. Do you think if exchange went back to the old rate of 1*s.* 11*d.* or 2*s.*, or whatever it might be, that the wheat trade would be seriously affected?—Well, I am not prepared to say; I fancy it would.

5073. And you think that the fall in exchange has stimulated the export of wheat from India?—Yes, there is no doubt about it.

5074. (*Mr. Courtney.*) Do you think that that will be an abiding stimulus?—I think so. I think it will go on increasing.

5075. I mean, supposing the rate of exchange remains at what it is now, that stimulus would continue to be as active as it is now?—Yes, I think more so. I think that as India is opened up with railways it will bring more of the country into cultivation.

5076. But you are there pointing to an increase of the export due not to the change of the rate of exchange, but to the opening up of railways?—I think it has more to do with the exchange. If the exchange had been 2*s.* I do not think you would have had so much wheat.

5077. The present rate of exchange is 1*s.* 4*d.* or 1*s.* 5*d.*; supposing it remained at that rate during the next 10 years, do you think that it would operate as an increasing stimulus to export during that 10 years?—I think the stimulus would be exhausted.

5078. You said that the rate of interest paid by a merchant buying a bill on China did not exceed very much, you believed, what was paid to Australia?—About $6\frac{1}{2}$, sometimes 7 per cent.; I should think to Australia it is between 5 and 6 per cent.

5079. And the rate to China does exceed the rate to India?—Yes, by about a half per cent.

5080. So that the rate to India and the rate to Australia would be about the same?—It is probable that the rate to Australia would be a little lower. Of course you have no risk.

5081. But an extremely trifling difference?—Yes.

5082. (*Chairman.*) As regards the increased opening up of the country by railways and such works, do you think that has been stimulated or diminished by the low exchange?—No.

5083. Do you think that with the rupee at 1*s.* 5*d.*, the railway works in India are likely to be more extensive or less extensive, or the same as with the rupee at 1*s.* 10*d.*?—I should think they would be able to raise more money for railways if the rate of exchange was low.

5084. Yes, but the money raised for railways is mostly in gold debt in this country, is it not?—In rupee loans as well.

5085. As regards the money raised by gold debt in this country there would be no advantage from the low rate of exchange?—No.

5086. (*Mr. Courtney.*) In respect of China I think I understood you to say that you could always get

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bills there, speaking generally?—Yes, as a rule we can get them.

5087. Against bills here?—Yes; the slackest time in the Chinese business is between February and the beginning of May.

5088. That depends in fact upon the crops?—Yes.

5089. But the trade with China is goods against goods?—Yes.

5090. And they very nearly balance one another?—Yes.

5091. But in the case of India there is a large annual payment made by India to England?—Yes.

5092. And therefore the goods from India must always largely exceed the goods to India?—Yes.

5093. And hence the trade bills one way must be largely in excess of the trade bills the other?—Yes, that is covered by Council bills or silver, or both.

5094. But mainly by Government drafts?—Yes. I think we export 6,000,000*l.* or 7,000,000*l.* a year to them of silver in addition.

5095. And that difference is an element in determining the rate of exchange?—Yes.

5096. (*Sir T. Farrer.*) You said that the effect of the present state of things was to cause very little silver to be kept in India, and that that raised the rate of interest?—By the English banks there.

5097. What sort of enterprises does that affect?—It affects loans on goods. You know, the merchants are not able to raise money so readily.

5098. And that would rather tend to check exports if it had any effect at all?—Yes, but we do not find it does.

5099. And I suppose that that raising of the rate of interest would not apply to raising capital for railways; it would be merely for temporary purposes?—Yes.

5100. (*Mr. Houldsworth.*) In answer to Mr. Courtney you said that you thought the stimulus to the wheat trade, for instance, would be exhausted if exchange was to remain as it is. Could you explain by what means it would be exhausted; how you think the present stimulus would not continue?—The country is opened up as much as it will be now, unless further railways are made to open it up. The ground is occupied.

5101. Then you think that the stimulus at present is due to the effect that is produced by the opening up of India?—Yes.

5102. Is there no stimulus by the difference between gold prices and silver prices?—No doubt that has had a great effect.

5103. But is that a direct effect, or is it only through the opening up of India?—Through the opening up of India, I should say.

5104. What are your opinions of the probability of exchange remaining as it is between the two countries?—I do not think there is any hope of it remaining as it is unless something is done to fix the value of silver.

5105. You think silver will fall?—Yes.

5106. (*Mr. Birch.*) May I ask you why you think silver will fall?—Unless the exports of India increase enormously we are frightened to buy silver.

5107. Do you know anything about the statement that China is going to coin a large amount of silver?—That is a very small business. It is for the province of Canton; not for the Pekin Government.

5108. But China still takes a great quantity of silver, does she not?—Oh, yes; but we export a large quantity of silver also from China. For instance, from the month of February to now, we send a large quantity of silver from China to India.

5109. Could you throw any light upon the circumstance I heard related about a large amount of silver pillar dollars coming from China, that had been formerly current there, and sent to Spain?—Yes, very large.

5110. What replaced them?—Mexican dollars. The Spanish authorities in Manilla have allowed the Mexican dollar to go in there, and so reduced the rate of exchange in Manilla from 3*s.* 10½*d.* to 3*s.* 3½*d.*

5111. By the introduction of Mexican dollars to take the place of Spanish dollars which formerly circulated at 3*s.* 10½*d.* to 3*s.* 11*d.*?—Yes.

5112. (*Mr. Fremantle.*) Did the pillar dollar circulate at the higher rate because of its scarceness?—No, it was because there was no other dollar allowed in Manilla.

5113. (*Mr. Birch.*) And the Mexican dollar has only now been introduced into Manilla?—Well, in fact, it is smuggled in.

5114. But I am dealing more particularly with China, because you will remember many years ago the Spanish pillar dollar was at a very large premium in China?—These have disappeared altogether.

5115. The ordinary Spanish dollars now have been replaced by Mexican dollars?—Yes.

5116. (*Mr. Fremantle.*) But the reason of that is, is it not, that the pillar dollar has been withdrawn from circulation by the Spanish Government?—Oh, no.

5117. Does the pillar dollar remain in Manilla?—Yes, they will not allow them to be exported; indeed the only place you could export them to was Madrid; now they have stopped that.

5118. (*Sir T. Farrer.*) I should like to ask if you know anything of what is doing with the American trade dollar in China?—Those are all sent back to America.

5119. In consequence of their being remonetized by the recent law?—Yes.

5120. Were there many of them held in China?—Yes, a great many, but they have been gradually finding their way back.

5121. But the remonetizing of them has given them an additional value, I suppose, in America?—Yes.

5122. Consequently, the people who held these dollars when they were remonetized made a good thing of it?—Yes.

5123. Do you know at all what the rise in value was in consequence of the remonetization?—15 per cent.

5124. So that the people who held those dollars made 15 per cent. in consequence of the American law which remonetized them?—Yes.

5125. (*Mr. Birch.*) How long have you been in the banking business with China?—28 years.

5126. Do you find that many more bills now are drawn upon Germany and France and the continent generally than there used to be?—Yes.

5127. Replacing bills that were formerly drawn upon London?—Yes.

5128. To what do you attribute that?—It is cheaper for one thing; the merchant on the continent wants his goods imported direct, and he finds the banks willing to meet him.

5129. Because one of the questions that we have had before us is as to whether there was any particular advantage considered abroad in having credits on England, by reason of people knowing that those bills would be paid in gold, and that if they were drawn on Paris or Germany they could not be certain of what they would be paid in. Do you attach much importance to that?—No.

5130. (*Mr. Barbour.*) Does the Secretary of State for India draw bills to the amount of from 13,000,000*l.* to 16,000,000*l.* sterling a year on India?—It was 13,000,000*l.* last year and 16,000,000*l.* this.

5131. Suppose he stopped drawing for one or two or three years, what would be the effect on the rate of exchange?—Oh, upwards.

5132. It would go up very high?—Yes.

5133. And that would be a great disturbance to trade?—It would.

5134. Have you any idea how high it might go?—It is impossible to say.

5135. It might go to 1*s.* 10*d.*, I suppose?—Yes, very easily.

5136. Do you not think it is possible that some of the silver countries that have over-valued silver might

take advantage of that to get rid of that silver?—I think they would at the present moment.

5137. And when the Secretary of State began to draw again he would have to draw still more, by reason of the money that he had borrowed in the meantime to meet his debts?—He would.

5138. So that you would have a reverse operation?—Yes.

5139. Have you any idea what exchange would go down to in that case?—It is impossible to say.

5140. That would be a great disturbance to trade?—Yes.

5141. Would it not be better to have a fixed ratio between gold and silver, supposing it to be practicable, than to be subject to these great risks in the future?—I think it would.

5142. What do you think would be the effect of the repeal of the Bland Bill?—It would be very disastrous if that silver was to be forced on our market.

5143. It would largely increase the wheat trade from India?—Yes, it would tend that way.

5144. What would be the effect if, in addition to the repeal of the Bland Bill, the Americans sold the 50,000,000*l.* of silver they have got coined?—They simply could not sell it.

5145. What do you think would be the effect on the rate of exchange if they tried to sell it?—It is impossible to say.

5146. (*Mr. Chaplin.*) I want to clear up the question about the bounty on wheat, which I confess I do not quite understand at present. I understood you to say that a rupee in England is now worth 1*s.* 4*d.*, or a little more?—Yes, 1*s.* 4¾*d.*

5147. A sovereign, therefore, will buy 15 rupees?—Yes.

5148. I understand you to say that the rupee in India still retains its purchasing power of nearly 2*s.*?—Well, no, not quite. The rupee, to the native, is a rupee; he does not care anything about exchange, and I suppose a rupee will buy as much rice to-day as it did when the sterling was 2*s.*

5149. Or as much wheat?—Yes, or as much wheat.

5150. It retains its purchasing power for wheat at 2*s.* Then I understand you to say that the wheat in India is bought by the corn merchants here in England?—Yes.

5151. Therefore it comes to this, that a corn merchant with a sovereign can buy 30*s.* worth of wheat; in other words, that for 1*s.* 4*d.* he is able to buy 2*s.* worth of wheat?—No.

5152. Well, will you explain how not?—Assuming that the quarter here is worth 30*s.*, the native knows the price in London as well as you do, and you pay him more rupees probably.

5153. But you told me just now that with a sovereign you could buy 15 rupees, and that the rupee retained its original purchasing power of nearly 2*s.*, as far as wheat was concerned?—Yes.

5154. In other words, that with a sovereign you could buy 30*s.* worth of wheat?—It does not though.

5155. I understand you to admit that the sovereign will buy 15 rupees?—Yes, at the present rate of exchange, about that.

5156. Well then, in India, how much wheat would 15 rupees buy?—It would buy about 20*s.* worth, that is all.

5157. Then how do you reconcile that fact with the statement that the rupee, in India, retains its original purchasing power of nearly 2*s.*?—I say it has not fallen so much. A native can buy as much rice with his rupee, at the present value of 1*s.* 4¾*d.* to the foreigner, as he could do when the exchange was 2*s.*

5158. He can buy, that is to say, nearly 2*s.* worth?—The equivalent of 2*s.*

5159. Either wheat, or rice, or any other commodity, and, I suppose, if a native can buy that, people who are not natives can buy that with the rupee; a corn merchant is not a native, and, according to you, he could buy nearly 2*s.* worth of wheat with a rupee?—But the rupee is not worth 2*s.* here; you fancy the rupee is worth 2*s.*

5160. You assured me that a sovereign could buy 15 rupees?—If you came here with a rupee you cannot sell it at 2*s.*

5161. But out there you said you could?—I said you could buy as much rice as you could when the rupee was at 2*s.*

5162. However, I understand you plainly to admit then, that with the sovereign you can buy 15 rupees at the present time?—Yes, about that.

5163. And those 15 rupees, in India, will buy nearly 30*s.* worth of wheat?

5164. (*Mr. Birch.*) They will buy exactly the same quantity of produce that they did before, and here you would have to give less money for it?—Yes, less gold.

5165. And, as Mr. Chaplin says, the benefit would be in the shape of a bounty; it is a difference in exchange which has the effect?—Yes.

5166. (*Sir T. Farrer.*) Do you mean that you think that the native exporter gets the whole benefit of the difference between the rupee at 2*s.* and the rupee at 1*s.* 6*d.* or 1*s.* 5*d.*?—No, no.

5167. (*Mr. Courtney.*) Mr. Barbour asked you a question as to the convulsion that would happen if the Secretary of State suspended drawing and the convulsion that would happen again if he resumed drawing?—Yes.

5168. How could the Secretary of State suspend drawing?—He could only do it by borrowing money here. The money has to be paid here and he would have to borrow here to pay his way.

5168*a*. Well, what would be the result upon the finances of India of that, I mean on the financial administration of India; I do not mean on the exchange?—I do not think it would benefit them.

5169. Would it merely mean *pro tanto* a declaration of insolvency on the part of India?—No.

5170. Well, it could not pay from year to year, or for some reason or other declined to pay from year to year its annual obligations?—I think the more exports from India we get the natives are better able to pay the taxes. The more we get from India, I think, the better able they are to pay.

5171. (*Mr. Barbour.*) With regard to the question of the Secretary of State suspending drawings; if there were a great war in India do you think the Government could borrow 20,000,000*l.* sterling in India in one year?—No.

5172. It would have to be borrowed at home?—Yes.

5173. And the Secretary of State would suspend his drawings for the time?—Yes.

5174. (*Mr. Birch.*) And, supposing the commodities to be shipped to the same extent, the vacuum in the bills would be filled up with silver?—With silver, if they could get it.

5174*a*. You must pay for what you buy?—Yes.

The witness withdrew.

Mr. Henry Hucks Gibbs recalled and examined.

5175. (*Sir T. Farrer.*) When we left off last time we were approaching one of the most difficult points in our inquiry, and I should like to ask you a preliminary question. You will admit that it is a serious thing to alter the existing standard of value?—Yes, every legislative action affecting commerce is a very serious thing, whether it has its origin here or elsewhere. The alteration which took place in our standard of value in 1873 was exceedingly serious.

5176. And any such alteration necessarily causes

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changes in methods of business, alterations in the effect of contracts, and in the relative positions of different classes?—You can judge of the importance of the changes which might take place in consequence of another alteration, by considering the changes which have occurred since 1873. I do not think there have been or would be any changes on that score in methods of business.

5177. But the other alterations, at any rate you admit generally, are things not to be undertaken lightly?—Certainly.

5178. Well, the position of London as a great financial centre and clearing house of the world makes it necessary for England to be especially cautious in making such changes?—England should be cautious in making any changes. She has not always acted on that wise maxim. Caution does not necessarily imply refusal to change. I have no doubt myself that England is the financial centre and clearing house of the world; but it is probable that our kinsmen on the other side of the water may have a like belief as to New York. I do not know that there is any evidence that the commercial position of that city has been affected for good or evil by the various changes in the monetary legislation of the United States. I do not think either Berlin or Paris had the same claim to that position; but I wish they had exercised more caution when contemplating the changes of 1873. They did more harm than any change on our part can do. England has surely shown great caution. An important change took place in 1873, to which attention was called as soon as its effects became visible. Part of those effects were considered in the Commons Committee of 1876, then came the Paris Conference of 1878, to which delegates were sent but forbidden to join in any vote on the subject. The Paris Conference of 1881 was attended with much the same result; and now, at last, after 14 years of cautious waiting, this country is happily giving a cautious consideration to the subject, and I must hope not without good results.

5179. At any rate, you admit that the burden of proof lies on those who propose any such alteration?—The burden of proof lies on anyone who proposes any alteration.

5180. Now the evils to which our attention has been directed are twofold; (*a*) evils arising from fluctuation in exchange on which I need not trouble you further; and (*b*) the appreciation of gold, an ambiguous expression, and which is perhaps better described as a fall in prices which is said to be causing depression in trade and agriculture?—Yes, those first evils, those that you say you have heard a good deal about, arise from absence of a common measure; and that, together with a fall of prices arising from many causes, has had a malign influence on trade and agriculture. Among these causes is a failure in the supply of gold to keep pace with the demands of one sort or another which have been made upon it. That is a better phrase, it seems to me, than appreciation of gold.

5181. Appreciation of gold is the same thing, is it not, as a general fall in prices; they are synonymous?—Yes, in one sense they are.

5182. An appreciation of gold must mean a general fall in prices. It is not simply a fall in some prices, but a fall *pro tanto* in all prices?—Yes, a fall *pro tanto*. It assumes that a certain depressing effect has been felt by all commodities.

5183. Not only by all commodities, but by everything which is measured by or exchanged against gold?—Yes, I include in commodities everything of that kind excepting securities, which, being promises to pay gold, are of course not affected adversely by the dearness of gold.

5184. (*The Chairman.*) By all commodities in the like proportion?—*Pro tanto*, of course, by everything. Things may have occurred and may be occurring which would alter the price of any particular commodity; that is to say, all need not be lower in price, of course, than they were before, but they will all be lower in price than they would have been had gold been plentiful.

5185. (*Sir T. Farrer.*) What it means is this, that a given quantity of gold buys more goods or other things, or a given quantity of goods buys less gold?—Yes.

5186. It differs from the expression "fall of prices" in assuming the fall to be general?—Yes.

5187. Fall of prices is very often used of only a partial fall?—Yes, it may be so.

5188. Then a fall of price of any article may arise either from increased abundance or diminished cost of production of the article on this one head, or from a diminished supply of gold on the other, or from both?—Certainly.

5189. Is not the effect of the fall absolutely different, according as it proceeds from the one cause or the other?—I do not see that the effect of the fall is so very different. It should be nearly the same; but the operation of a rise in the purchasing power of the precious metals, caused by their scarcity, is more occult than that which is caused by increased abunbance of commodities. I have heard it said that in the latter case there is no need to interfere. I should rather say that interference is scarcely possible. If, for example, the earth, here or elsewhere, produces more wheat, we cannot prevent its doing so, and if, whencesoever it comes, it is, on balance, advantageous, we shall not desire to interfere with it.

5190. My words were, "Is not the effect of the fall "absolutely different according as it proceeds from "the one cause or the other." If it proceeds from increased abundance of the article sold it is an advantage to the world and there is no need to interfere with it?—That is what I had in my mind when I said that if, whencesoever the additional abundance comes, it is, on balance, an advantage to the world, we never can interfere; at all events, if we can interfere we do not desire to do so. I say "on balance," because there may be other things which might counteract the advantage.

5191. But I presume the increased abundance of an article that the people desire to consume is an advantage to the world?—It is, but there might be disadvantages attendant upon it.

5192. There may be disadvantages to certain persons who may suffer from competition, but, on the whole, increased abundance of the things which men desire is an advantage to the world, is it not?—At the moment; not of necessity afterwards, because if the effect of its action upon those people who have to produce certain articles, becomes prejudicial to the world it may be ultimately compensated, so to speak, or annulled. What I will answer is this, that for the present, at the present speaking, it is an advantage to the world.

5193. It is an advantage to people that they should get more of the things which they desire at a less cost of human effort and human labour?—Certainly: all other things being equal.

5194. (*Mr. Courtney.*) Could you illustrate that effect which you think might annul it?—I will suppose, for the sake of argument. that we might come to receive all our supplies from abroad, food, clothing, all the necessaries of life, at a very cheap rate, and that our own land was thrown out of cultivation, our own factories closed. We might be living, as it used to be said was at one time the case with Holland, on our means, every industry of the country being destroyed. I am not using this to argue that such a state of things is probable, but only as an imaginary illustration. That, I think, would be a condition of things that might annul that temporary advantage which it would have no doubt gained by the cheap production of the necessaries of life.

5195. (*Sir T. Farrer.*) At any rate, for the purpose of our present argument that is not an evil which you would wish to interfere with by any legislation with respect to currency; you would not wish to attempt to prevent increased abundance of the commodities which people desire to consume?—Certainly

not, if that were all. I have always said that the alteration of prices which might ensue is a subsidiary and doubtful accident of the proposed measure.

5196. Let me take two articles; let us say that cotton goods are produced at a much less cost than they were by reason of improvement in manufacture?—Yes; I suppose you mean in a foreign country.

5197. Let us say that wheat is brought to this country at a very much less cost in consequence of the opening up of railways and the cheapening of steam communication?—Yes, which it is, no doubt.

5198. In such a case you will have a very great fall in the price of both these articles?—Yes; supposing that the improvements of which you speak cause an increase of production and consequent competition.

5199. That fall is not a fall with which you would think it necessary to interfere by currency legislation?—Certainly not; no natural causes should be interfered with in any such way.

5200. You and I agree on that; some persons would not. At any rate you would not interfere with that cause by any currency legislation?—No.

5201. Then having got so far, it rests, does it not, with those who propose an alteration, first of all to prove that there has been a general fall in prices?—No, I would hardly say that. It does not rest with anybody to prove that there is a general fall in prices; it suffices to prove that there is a scarcity of gold, because a scarcity or dearness of gold *is* a fall in prices, therefore the point to be proved for this particular purpose is that there is a scarcity of gold or dearness of gold, which is a fall in prices.

5202. Then you would say if you prove a scarcity of gold you may assume a fall in prices?—I may assume *pro tanto* a fall in prices.

5203. Then we may put out of consideration all the evidence we have had before derived from the index numbers of *The Economist*, and things of that kind. I want to know whether you do not think that that is one of the steps in the argument that those who wish for a change ought to prove?—Of course, you might begin at either end of the staircase. You might show that there was a fall in prices, and then you might inquire as to what had been the causes of that fall, or you might say there was a dearness of gold caused by a deficient supply and an increased demand for gold, and that necessitated a certain fall in prices. What I want to say is that to prove that there is a fall in prices would not at all suffice, for a fall in prices might have arisen, and has arisen, from many other things, whereas if you prove that one point, that there is a deficiency in the supply of gold compared with the demands that have been made upon gold, you prove by that very fact that there is a certain fall in prices, that is that there is a certain adverse effect produced upon prices.

5204. That there is a certain cause which ought to produce a general fall of prices, and probably does?—I would say more than that, that involved of necessity a general fall in prices, even though other circumstances may have occurred to annul the fall and even to raise the price.

5205. May I ask you whether you think that a general fall in prices has been proved as matter of fact?—Yes, I do.

5206. Will you tell me on what evidence you rest that?—Well, I take it on Mr. Giffen's evidence, amongst others. I take the evidence of those who have been most opposed to me in this matter; they almost all agree or have agreed.

5207. You have not seen Mr. Giffen's evidence before this Commission?—No, I have not.

5208. I think he told us that upon a great many things which are measured in gold we have no evidence whatever that would justify us in saying that there has been a fall in prices?—But then, in those very things in which Mr. Giffen would say, and quite rightly say, that there is no fall in prices as compared with the prices that were before, I say there is and must have been a lessening of the price which would otherwise have been reached.

5209. Must have been is a different thing?—No, excuse me, the expression is just. If gold has been scarce and dear, prices diminish *pro tanto;* but the price of wheat may have diminished at some time or another 35*s.*, and it may be at another time 36*s.*, and yet there would have been an adverse action on the price of wheat.

5210. I only wish to get from you whether you think that it has been proved that there has been an actual fall in prices of all the things which are exchanged against gold, or are measured in gold as a matter of fact? If you will say that you have not exhausted that part of the subject that is quite sufficient for me?—Then, in order to make it clear, let me say a general reduction of prices, if you will understand the difference which I mean to make between that and a fall; I mean that the measure being shortened whereby we measure the prices of commodities, it is inevitable that, to a certain extent, those prices have been reduced. Do you see what I mean?

5211. (*The Chairman.*) You yourself have said that you may begin at either end of the staircase. Sir Thomas Farrer is saying, beginning at that end which has to do with fall of prices, do you think there is such evidence of general diminution of prices (which does not mean necessarily that the price of everything is lower) as to afford evidence from that fact, if there were nothing else, that gold has appreciated?—Yes; it is an extremely difficult question to answer, because even though there should not be on the whole range of prices a fall, which is, I suppose, what Sir Thomas Farrer means, yet I say that the dearness of gold, from something belonging to gold, must inevitably have made a reduction of the price, and if it were not that gold were scarcer in the sense that I mean by scarce, then the general average of prices would have been higher than it is.

5212. (*Mr. Courtney.*) Would you conduct it in this way? Take the range of prices of 1,000 articles. You find, let us assume, for the sake of argument, that in 700 there has been a fall in prices, in 200 prices have been stationary, and in 100 prices have gone up. You examine the causes of production as roughly or as nicely as you can of the different articles, and you find some special reason to explain why the 100 have gone up, you find some other special reason to show that prices would have gone up if there were not a disturbing cause bringing them down. Then, surveying the whole range of 1,000, you come to the conclusion simply from the observation of phenomena that there has been a cause depressing prices generally. Sir Thomas Farrer asks you whether you have made that survey?—Well, I will not say that I have done it with the care and accuracy that a professed statistician does, but I have in some sort made that survey because I have read what other people have written about it, and have taken it on trust from Mr. Giffen and others.

5213. (*Sir T. Farrer.*) Have you read what German and American statisticians have said about wages in Germany and America?—I cannot say that I have.

5214. Have you seen any evidence at all as to the price of land in gold-using countries?—Yes, I have seen and known evidence of the price of the land in this country.

5215. Agricultural land in this country, no doubt; but the price of land generally in this country, and the price of land in America, which is just as important?—No, I cannot answer upon those points, except so far as to say that the only thing of importance to our subject is the chrematistic, as opposed to the apolaustic, use of land; that is to say, land bought for reproductive profit, as against land bought for enjoyment. The purchase of the latter at extravagant prices, if that has anywhere taken place, is no more an indication of general values, than the giving 10,000*l.* for a picture or an opera-box.

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5216. Do you know whether we have any distinct evidence about retail prices?—Yes, I should say we had evidence before us on the Commission on the Depression of Trade on that matter.

5217. Anything that we can rely on as a general result?—How could one tell? It will depend upon the credibility of the various witnesses, and the estimate which you may form of them. We have got their evidence before us. We can study that. My impression, as I said before in this examination, is that wholesale prices have fallen more than retail prices have fallen. Retail prices have very little bearing on the point. See the passage which I have already quoted from Mill, Q. 4531.

5218. Have you ever considered this point, that the evidence we have of wholesale prices is confined to this country, and that the whole object of legislation in this country is to make wholesale prices cheap?—No. I should say that when I was in Germany I heard that, at least as regards agricultural prices, there had been a very great fall in wholesale prices there.

5219. But you do not know that we have no statistics of foreign countries, even to the same extent as we have here?—I do not know whether we have or not, but inasmuch as England is the mart of the world, I think prices may fairly be gauged by the English market.

5220. Then we will go to the other part of the subject. The evil that is alleged and the remedy it is proposed to apply, only relate to a fall of prices if that fall is due to what we may call "scarcity of gold"?—Yes, that part of the evil.

5221. Or "diminished supply of gold," or failure of gold to meet the demands upon it?—Yes, the evil that is alleged, so far as it consists in falling prices, and so far as the fall is due to the failure of gold to meet the demands upon it, would be partly or wholly remedied by the proposed measure.

5222. When, therefore, we are told that wholesale prices in England have fallen, it rests with those who would apply a remedy to show that the fall has arisen from a "scarcity of gold"?—It rests rather with them to show that there is such a scarcity or such a failure. If there is, the reduction is a necessity.

5223. It is therefore important, is it not, to understand how a scarcity of gold affects prices, and especially wholesale prices?—Yes. I have been quite content to accept the authority of all the great writers on economics, who all show that "the value of money is increased in an inverse ratio to its quantity." I do not except Mr. Tooke, for though he set himself to prove the reverse, he very ingeniously refuted his own arguments. Hear what Mr. Torrens says about it in the "Principles and Practical Operation of Sir Robert Peel's Bill of 1844 explained," page 86. "It will be unnecessary to refer to further authorities "for the refutation of Mr. Tooke, inasmuch as "Mr. Tooke has been completely successful in "refuting himself. He has written volumes on the "influence of quantity on price, and has shown, by "the most elaborate details, that on all the remarkable "occasions on which an advance or decline of prices "has occurred, the advance or decline was occasioned "by a decrease or increase in the quantities of the "commodities respecting which the variations "occurred. Gold is a commodity governed, as all "other commodities are governed, by the law of "supply and demand. If the value of all other "commodities in relation to gold rises and falls as "their quantities diminish or increase, the value of "gold in relation to commodities must rise and fall as "its quantity is diminished or increased. But gold is "the standard of our money. An increase in the "quantity, and fall in the value of gold in relation to "commodities is the same thing as an increase in the "quantity and a fall in the value of the currency in "relation to commodities is the same thing as a rise of "prices. Mr. Tooke's History of Prices is a "magazine of historical facts demonstrative of the "fallacy of the principle that 'variations in the "'quantity of the circulating medium do not affect "'prices.'"

5224. Now, I want to ask you to go back to the prices of wholesale commodities. Is any appreciable amount of gold used in England in ordinary wholesale transactions?—Yes.

5225. Where, and how?—Every transaction is based upon gold, and gold is used in it.

5226. "Based upon gold" is an ambiguous expression; does any gold pass?—In every case gold passes. It does not necessarily involve the actual handling of the metal, but every cheque you draw is a transfer of gold or notes, and every note you give in payment is the actual transference of the ownership of a certain number of grains of gold supposed to be lying in the vaults of the Bank of England from yourself to the person to whom the note has passed, and if it were not absolutely certain that he did acquire the ownership of the gold, commerce would stand on a very different footing from that which it now stands on. For the purposes of this argument, therefore, we may treat notes as identical with gold. I say "supposed to be" in the vaults of the bank, because they are not all there; but they are all obtainable by the bank, and available for the conversion of the notes.

5227. (*The Chairman.*) Might not the amount of cheques which went through the Clearing House to-morrow be doubled, and yet the result, namely the transfer of balances from one banker with the Bank of England to another be precisely the same, and the amount of bullion at the Bank of England be precisely the same?—Certainly.

5228. (*Sir T. Farrer.*) You told me the other day that gold was not a metaphysical thing; that it was a physical thing?—I do not remember saying that, but I daresay I did.

5229. I want to know whether gold is used physically in wholesale transactions; we are now talking of the quantity of that particular metal in the world?—My answer to that is, that every time you sign a cheque you do exactly the same, as regards ownership, as you would do if you had to pay 5*l.*, and instead of paying 5*l.* by cheque, you handed it over to me. You sign that cheque; the gold at the Bank which it represents is yours. When you have passed that cheque to me the gold is mine, but, as Lord Herschell says, the multitude of cheques may be repeated, not infinitely, but may be continually repeated, all day long.

5230. But do you mean to say that if I draw a cheque for 100*l.* upon my banker, and pay it to you, that that is exactly the same thing in its effect upon the demand for gold in the world as if I took 100 gold sovereigns out of my pocket and paid them to you?—Most certainly not, because otherwise all what we have called banking expedients would be of none effect; but we know that they are of very great effect; when however you speak of gold not passing, I say gold does at that moment pass from you to me.

5231. Well, I ask you where it passes?—It seems to me that it does not matter whether it passes from your waistcoat pocket to mine, if that which has become mine in the bank becomes yours in the bank.

5232. But we are now talking of the demand upon this physical substance, gold?—Yes.

5233. Where does that physical substance appear?—In the bank.

5234. And how many of all the cheques that have been drawn in London to-day could be paid by all the gold that is in England?—They could not, of course; that is the very thing I say; they for the most part cancel one another; but each cheque effects a change of ownership not involving practical handling.

5235. (*Mr. Houldsworth.*) If the cheques were immensely increased would it have any effect?—None of any importance. The cheques, for the most part, cancel one another.

5236. Then the same quantity of gold might be the basis for double or 100 times the number of cheques

up to a certain point?—The number of transactions bear no necessary proportion to the gold.

5237. Till credit began to give way and there was a fear that there would not be enough gold to pay?—Yes.

5238. Therefore the quantity of commodities and the number of transactions has nothing to do with the quantity of gold that is required to carry them on?—I do not say that. There you have added in words which alter the meaning very considerably. You say "the quantity of commodities."

5239. (*Sir T. Farrer.*) Do you consider currency to be, as the books tell us, a "medium of exchange" in wholesale transactions. Is it not rather a "standard of value"?—Currency I understand to be a tool of exchange, entirely distinguished from the abstract idea of a standard.

5240. (*Mr. Courtney.*) What is currency?—The money circulating.

5241. (*Sir T. Farrer.*) Let me drop the word "currency" and use instead the expression "gold," and let us consider that notes and gold are equivalent in this country. Well, do you consider that gold is a medium of exchange in any wholesale transactions to any and what extent, or is it not rather a standard of value?—It is a standard of value, but of course its actual operation, the way in which it works, is as a medium of exchange, though it is a standard of value. A standard of value must be itself liable to rise or fall in terms of the commodities which it measures. Gold could not work as such a standard or measure if it were all melted into one vast pyramid. It has a dynamical as well as a statical value. It must be capable of passing as a medium of exchange.

5242. But is it practically used as a medium of exchange?—I think we are getting somewhat metaphysical now. I should say it is. My former answers would show that in what way I consider it to be so.

5243. Because it seems to me that this idea of scarcity of gold is largely founded on the opinion that it is used as a medium of exchange, and that in consequence the demand for gold must increase in proportion to the quantity of commodities and the number of transactions, and I want to know whether that is the case?—No. I demur to the number of transactions bearing a proportion to the needed amount of gold; that is the point on which we are all agreed, viz., that banking expedients make the number of transactions almost unimportant; the quantity of commodities does bear a proportion to the gold required. Gold, saving the economy of it by banking expedients, is, I consider, the medium of exchange in this country, and it is also the standard of value over all gold-using countries.

5244. You would agree, then, with this well-known passage out of Hume's essay on money: "It seems "almost self-evident that the prices of everything "depend on the proportion between commodities and "money. . . . It is the proportion between the "circulating money and the commodities in the market "which determine prices. . . . Great under-"takers, manufacturers, and merchants can deal in "nothing but specie." That is the way in which he goes on to illustrate his position. "Can deal in nothing but specie,"—specie is the basis of it all?—That is what he means, and I agree with it.

5245. Here is another passage I find in Mill. Chap. VII., Book 3: "The supply of money is all "money in circulation. The demand for money "consists of all the things offered for sale. Every "seller of goods is a buyer of money, and the "goods he brings with him constitute his demand. . . "As the whole of the goods in the market comprise "the demand for money, so the whole of the money "constitutes the demand for goods. The money and "the goods are seeking each other for the purpose of "being exchanged"?—Certainly.

5246. You think that that expresses the truth?—I think it does.

5247. (*The Chairman.*) But as to the quotation that has been given from Mr. Mill, would you agree that it is accurate if by money is meant merely gold coins?—Oh, no, I do not mean gold coin only; certainly not.

5248. Gold coin or the bullion held by the Bank?—Gold; that is to say, in gold-using countries whatever gold is available for meeting liabilities. Bullion in the Bank is practically coin, both because it is coinable *ad libitum*, and because it is in actual circulation in the form of notes.

5249. (*Mr. Courtney.*) Let me put it to you in this way for the purpose of ascertaining whether we do understand one another. Supposing there is now in the Bank and in private persons' hands 80,000,000*l.* of gold; do you consider that that is the quantity of coin which is said to be seeking commodities or against which this quantity of commodities is said to be seeking money, or would you add to that 80,000,000*l.*, 15,000,000*l.* more, representing the credit issue of the Bank of England?—I should say, in answer to that, that I do not limit it to those 80,000,000*l.* that you speak of, because there is that sum of 15,000,000*l.* or 16,000,000*l.* which depend for their conversion into gold upon a portion of the gold in the rest of the world, inasmuch as, in order to be able to meet all those notes, provided you had to meet them, it would be necessary to attract gold to this country. You could not do it; nor, as a matter of fact, would you ever need to do it, inasmuch as they never could all be presented, both because of the physical impossibility, and because long before matters came to that point, the Bank, by the sale of securities, would draw in its notes, diminish its liabilities, contract the circulation, and raising the rate of discount as the consequent demand for loans increased, would bring in gold from abroad; and this bringing in shows that the presence of the material substance gold is a real necessity.

5250. Still those 15,000,000*l.* are all the credit issue in addition to the precious metal issue?—Yes; they are a part, you may say, of the expedients, not banking expedients, but currency expedients of the world.

5251. And you include in the volume of money seeking commodities that which rests ultimately upon the credit of this country, as against the world?—It must rest upon gold somewhere. It is not the credit of this country only, although the credit is what you and I have to rely upon, if we hold a certain portion of the notes.

5252. The possibility of getting those 15,000,000*l.* by some means or other, at our will, converted into gold?—Yes.

5253. Well then, would you add any other forms of credit which are circulating among us, besides Bank of England notes, which depend also upon the possibility, in the case of a general liquidation, of being converted ultimately into gold. Supposing you had circulating here Treasury bonds of the Bank of France?—Well, if I am to consider that, which, however, seems to me to be somewhat removed from our question, that would in that case be a part of the currency expedients of the world. One might even add a further thing, one might add the inconvertible currency of other nations. I suppose you might add that, because had they not that inconvertible currency it is probable that they themselves would also need one or other of the precious metals to serve as a medium of exchange and measure of value in their own country, which would be a further drag upon the precious metals existing in the world.

5254. All this extension of the range of the meaning of money seeking commodities and determining the price of commodities, diminishes the importance of the element of gold?—All banking and currency expedients help to make it possible for us to transact that vast business which we now do transact, and which, if we had no such banking expedients, we certainly could not transact with any comfort, upon the basis of the existing quantity of gold. They do not diminish the importance of the element of gold. They obviate the necessity for the

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employment of so great a quantity of specie as would otherwise be needed. The importance of that which is needed is rather increased than diminished.

5255. Well now, might we go a step further, and, in addition to these supposed notes or bonds of a foreign country, might we assume that if the bank here held at its reserve the stocks of a foreign country, which it would convert, if necessary, by sale, in order to satisfy the demands upon itself; supposing there was a run upon it by its creditors, would those stocks of a foreign country represent part of the volume of money seeking commodities? — They would not. There can be no difference between them and any other investment of the bank. The bank would pay for them in notes; if the bank wanted the money it would sell them for notes. I fear I do not follow the sense of your questions. Such investments are no more money than a house would be, if the bank should buy one.

5256. (*The Chairman.*) Part of your position, as I understand, is that in the 10 years preceding 1873 prices rose and were rising up to that time?—Yes, there was a general tendency to rise, I suppose; I will not answer for it.

5257. During those 10 years there was a very large increase, was there not, in the supply of commodities, speaking generally?—There may have been; it is certain that there has been a continuous increase in the facility for bringing commodities to this country; but whether that began to any great extent in the decade preceding 1873, I am not sure.

5258. In fact, there was a great increase generally of production, if you take commodities as a whole?—I should be inclined to doubt it. The Franco-German war took place in that decade, and war both stops production and consumes commodities.

5259. I wanted to take 10 years for a particular purpose, not to go further back; during the 10 years prior to 1873, was there anything like the same increase in the production of gold as there was in the production of commodities generally?—The gold produced in that decade was 30 millions less than in the previous decade; but it was still very large, and I have no evidence that it bore a diminished proportion to the commodities. I should say there was probably a proportionate increase in the gold-using countries; I have not compared them, nor would it be at all easy to compare them.

5260. From 1863 to 1873; I expressly confined my question to the 10 years prior to 1873?—As I have already said, there was a very considerable increase in the production of gold; it went on increasing.

5261–2. There was some increase each year. But suppose the increase in the volume of commodities was greater than the increase in the volume of the currency, if prices depend upon the measure of commodities against the money that is seeking commodities, if there was a much greater increase in the commodities than the money that is seeking commodities, you would expect prices to fall and not rise?—Yes; but there is one certain factor in the comparison which we have omitted; while one at least of those which you have taken into account, the increase of commodities, is uncertain. War raises prices, that war especially, where the French issue of notes threw eighty millions of gold into the gold-using countries. Set those 80,000,000*l.* against the 30,000,000*l.* diminution of which I have spoken (Qu. 5259), and you have 50,000,000*l.* *increase* of production. But when we speak of the increase of commodities, we are speaking of what I really do not know, what I much doubt any one else knowing with any accuracy. Did commodities in those 10 years increase? Did they increase to that extent?

5263–4. (*Sir T. Farrer.*) May I put the same thing again in this way. I have seen a statement that not one per cent. of the whole commercial transactions of this country are really carried on with gold or notes, that 99 per cent. at least are effected through the medium of banks, cheques, clearing houses, and so on?—I should think that is quite right—quite true; because the clearing house is a great office for the mutual cancelment of cheques, for reducing gigantic transactions to very small proportions. Such transactions also include large dealings in securities, which have nothing at all to do with the relation of commodities to the measure of value.

5265. It would probably be the case, would it not, that at the time when Hume wrote the passage which I have mentioned, that that would have been far from being the truth. Probably a very large part of the transactions would be actually carried on with gold as a medium of exchange?—Yes.

5266. Consequently, there seems to be in all advanced nations, does there not, a continued sparing of the use of gold, and a continual return to something like a system of barter, with gold as the measure of exchange?—Yes, I think so—I think that is quite true; but I would say, when you make that comparison between Hume's time and ours, that the comparison does not it all militate against what he said, because, although it is a matter of necessity that as time goes on and production increases, and commerce increases, and the transactions increase in magnitude, some such development of currency and banking expedients should take place; yet that which is the basis of all of them is the gold to which they refer in plain terms; exactly in accordance with what Hume says. Dr. Johnson gave a practical answer to your question, writing in Hume's time. "Why, no, Sir. The reason why eggs "are sold for 6*d.* a dozen in Scotland, while they cost "a penny a piece in London, is not because eggs are "plentiful in Scotland, but because pence are scarce "there."

5267. What I wished to get at was this, that an increase in the quantity of commodities to be exchanged, or an increase in the number of transactions by which they are exchanged, does not necessitate a proportionate, if any, increase in the quantity of gold used in those transactions?—Yes, I think the increase in the amount of commodities at any moment (the dealings in a certain increased amount of commodities) does require more gold; not perhaps more gold measured by the quantity of commodities, without dealings.

5268. Or by the number of exchanges?—Nor by the number of exchanges. That the clearing houses settle without requiring any great addition to the quantity of gold. That would be necessitated by the increase in the quantity of commodities to a proportionate amount.

5269. (*The Chairman.*) A certain additional percentage probably to what we call the reserve, on which the transactions rest?—Yes, that is what I mean.

5270. (*Sir T. Farrer.*) Is it not a fact that the most advanced commercial nations use by far the smallest proportion of gold in proportion to their dealings?—Certainly, because of the increase in the banking and currency expedients.

5271. Then may it not be the case that gold is ceasing, in advanced countries, to be a medium of exchange, and is coming to be used more and more only as a measure of value. That is the statement of Mr. Jevons; he says, for instance, in his book on "Money," chap. xv., "No sooner have a people "fully experienced the usefulness of a good system "of money, than they begin to find that they can "dispense with it as a medium of exchange and return "to a method of traffic closely resembling barter. "With barter they begin and with barter they end; "but the second form of barter, as we shall see, is very "different from the first. . . . . Purchases and sales "continue to be made in terms of gold and silver coin, "but equivalent quantities of goods thus estimated "are made to pay for each other. If ownership of "gold or silver intervenes at all, it is in the shape of "warrants or representative documents with which "gold can be procured if desired, but which are "seldom used to procure it"?—Mr. Jevons's opinion is deserving of all possible respect; but his words "dispense with it as a medium of exchange" must

not be taken too literally. His description of the course of commerce is most accurate, and shows the effect of all our banking expedients, especially that of the clearing house; but I am sure he would have been the last to deny that the gold basis was a necessity of the system, which rested entirely on a proportionate gold reserve, serving as the material foundation of every exchange. No one will assert that this reserve can be wholly "dispensed with," nor will venture to define how much or how little is needed. Banking economies may be augmented and improved, and the quantum of the gold basis may thus bear to be lessened; but be they as great or as little as they will, it must bear some proportion to the quantity of commodities dealt in, and I must still think that the gold being the foundation of the old structure, every new dealing in commodities is a new dealing in gold.

5272. Requiring an additional amount of gold?—In proportion.

5273. In the world generally?—Yes. As commodities increase so you will need more specie.

5274. I want to know what is the relation between the increased demand for gold and the effect of expedients for saving gold?—Merely this, as it seems to me, that in so far as gold is not economised by banking expedients, the relation between that gold and the increased quantity of commodities will be marked by a change of prices; that is, it is prices that are affected.

5275. Might not wholesale dealings in this country be doubled without any more gold?—Certainly wholesale dealings might be increased, that is if you mean wholesale transactions, not including more commodities, but merely payments, however large, which are all concentrated in the day's work of the clearing house. A payment for a cargo can be cleared as easily as that for a ton; but he who has to pay for a cargo must needs have a larger balance at his bankers than he who has to pay for a ton of the same commodity; the banker must needs have a larger balance with the Bank of England, and the Bank of England a larger reserve of notes, involving the necessity of a proportionately larger stock of gold.

5276. (*Mr. Barbour.*) Would not that tend to increase the liabilities of the banks; would not the amount of bills discounted, and so forth, be very much greater?—Yes, the liabilities would increase, as stated in my last answer; and as to the bills, that is for people to consider how far their wisdom will allow them to take those bills, if there is any fear. There is no doubt that when business is brisk and discounts large the banking department must be the better provided with reserve. But I may observe that there is often an inexact use of the word reserve. You, I think, have in your mind the stock of coin and bullion in the Issue Department. But the reserve means the amount of notes (with a small amount of coin) which we as bankers, acting as any other bank does, keep in our till to meet the demands of our customers. The stock of gold held by our other selves in the Issue Department always equals the total amount of notes held by us, other banks, and the rest of the public, minus 15,750,000*l.* of fiduciary issue.

5277. The reserves of the bank must bear a certain proportion to the transactions, must they not?—The greater the transactions the more is the possibility of bad debts.

5278. You would require a larger reserve?—A larger reserve in proportion to the liabilities that we have.

5279. That is to say, you could not carry on the transactions of England without a greater reserve than would suffice for a bank in Jersey?—No; because the liabilities of your Jersey bank would not be anything to demand such a reserve.

5280. Well then, it comes to this, that, other things being equal, the greater the magnitude of the transactions, the larger must be the reserve; you are always liable to be called upon for gold?—Only in the Issue Department of the Bank of England are we liable to pay our notes in gold. The larger the deposits the more reserve must the Banking Department keep—reserve of notes. It can pay its liabilities in notes as well as the rest of the world.

5281. That is, the more gold you would need, because the notes represent gold?—If there are more notes there is necessarily a greater reserve of gold in the Issue Department, that is all.

5282. (*Sir T. Farrer.*) You were asked whether wholesale dealings might not be multiplied indefinitely without the need for using a single additional ounce of gold?—If so, the converse must be true, and the stock of gold may be indefinitely diminished without impeding our wholesale dealings. But if that is so, how far may we go? Will you put no limit? Will half a dozen ounces suffice? Why not have an inconvertible currency at once? It is quite true that even that would not impede wholesale dealings; cheques and the clearing house would still exist. But the reduction of the stock of gold in the world, or its increase, would affect prices, however little the mechanism of wholesale dealings might be touched.

5283. I am not at all denying that the quantity of gold has a bearing upon prices, I am only now analysing wholesale dealings, and I want to know how far the increase of wholesale dealings increases the demand on the physical stock of gold in the world, and on that, I think, you stated that it depends on the increase in the quantity of dealings?—Of commodities, not of dealings; that is really a different thing; the increase in the quantity of commodities is one thing, the increase of dealing with the same commodity over and over again in the same day is a different matter.

5284. I am now talking of gold as a medium of exchange, and unless there is dealing, there is no use for gold as medium of exchange?—There must be dealing, of course.

5285. Then if an increase in the quantity of goods to be sold, or of sales, does not create a demand for the use of an increased quantity of gold, can you explain what is the exact connexion between the supply of the standard metals and prices? How does an increased or diminished supply operate?—I have nowhere said that an increase of the quantity of goods to be sold did not create a demand for the use of an increased quantity of gold. I said just the reverse. But I said also that an increase of transactions in the same goods did not involve the necessity for an increase of gold. Under a perfect or good system of banking transactions of great magnitude can be cleared as easily as much smaller ones, at the cost of a little more clerical labour and without the cost of additional gold; but a great addition to the number and mass of commodities to be dealt with, and to the population which has to deal with them would, in fact, alter the proportion between the gold and the commodities, and cause either a demand for more gold, or a greater demand, involving an enhancement of price for the existing gold. For it must be admitted, as I have said, that every cheque causes a transfer of ownership of a certain quantity of sovereigns, and that the same sovereigns cannot be simultaneously transferred from A to B and from C to D. Suppose all commodities in England to change hands at one moment, and to be but 10 in number, represented by 10 equal cheques of 5*l.* each, transferring the ownership of the 50 sovereigns in the bank; it is clear that 10 additional commodities of the same intrinsic value, to be dealt with at the same time, would either need additional cheques for an additional 50 sovereigns, or else the 20 cheques must be for five half sovereigns apiece instead of five whole ones. That is to say, prices would fall. For England read the whole commercial world. For 10 commodities and 50 sovereigns read the whole mass of commodities and the whole mass of gold. Suppose the commodities doubled, and the relation to the mass of gold will be seen to follow the analogy of that above supposed. The *actual* case is different, because the gold in the bank does not equal the cheques which can be simultaneously drawn and presented for cash payment. The question how, in the way of distribu-

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tion an increased or diminished supply operates has been already answered under Question No. 4675.

5286. (*Chairman.*) When A transfers money to B by cheque, you say he transfers the ownership of so many sovereigns, but the number of sovereigns so transferred exceeds, does it not, the amount that you would suppose to exist? I do not know how you could transfer the ownership in non-existent things?—You do not; but of absent things you may. The physical substance which the uncancelled cheques transfer is partly present and partly absent.

5287. I draw a cheque that transfers from me to him the ownership of five sovereigns, and so in the case of every transaction, but the sovereigns which are thus transferred from one person to another each day in London do not exist, and nothing like that quantity exists?—Surely they do at any given moment; not that the whole quantity is present in England, but just that proportion of it which is affected by the difference between the coin and bullion in stock, and the total issue of Bank of England notes. But if you have received an open cheque for 100*l.* on the Bank of England, you know that nothing can prevent your demanding and receiving first, notes, and then, if you desire them, 100 sovereigns. The same is the case with each and every recipient; as a matter of fact they do not demand notes, because they, or their bankers, owe about as much as they are owed. We may take it that every cheque assumes a balance at the bank on which it is drawn. Against such cheques the banker must keep a sufficient reserve in notes payable at the Bank of England; and those notes, as just now said, are represented by bullion there existing or easily procurable. If it be answered that the reserve of notes kept by the banker supposed to be drawn on is but a small portion of the credits which his customers have with him, which credits are also for the most ultimately secured by the same bullion, so that the cheque in question has a hold on only a small portion of it, it must be replied that however that may be, he would have an indefeasible claim to, and could at pleasure receive, the 100 sovereigns which have been made over to him; and this could only be accomplished in case of pressure by our augmenting the stock of gold in our vaults. But none of this discussion really touches the question of the necessity of our store of bullion, and its effects upon prices. We all know that it is necessary, and we know the immediate and temporary effect upon the rate of discount and upon prices, produced by its diminution or increase from time to time, but that is a very different thing from the ultimate effect of the increase or diminution of the measure of value in the world, as described by Mill. My position is that when a cheque passes from one to the other, sovereigns pass from one as owner to another as owner, though not from hand to hand, the successive owners acquiring the absolute right to demand them. Of course, those same sovereigns can afterwards by another transaction be passed to somebody else. I am now speaking only of the simultaneous action; that is to say, you cannot but transfer sovereigns every time that you give a cheque. They need not be different sovereigns; on the contrary, if it is a transfer from A to B, and then again from B to C, of course they may be called the same sovereigns.

5288. (*Mr. Courtney.*) Suppose at any one moment of time every person who had acquired by transfer and possessed at that moment of time a right to sovereigns said, "I should like to have them in my pocket," what would happen?—Physically, they could not, because the Bank of England could not hold the applicants.

5289. (*Mr. Houldsworth.*) Does it not come to this, that the same ounce of gold supports several times its own transaction?—Certainly, a myriad of times, inasmuch as the cheques cancel one another.

5290. (*Sir T. Farrer*) The cheque that you speak of is a right to five sovereigns?—Yes.

5291. But it is a right which by custom and use is never, or scarcely ever, exercised; is that not so?—Very little, but rather by necessity of business than by custom.

5292. But in wholesale transactions it is never exercised?—In point of fact, it is seldom exercised in home transactions in the sense of handling the gold, because the movements of bullion from the Bank of England are for the most part international movements rather than internal movements. Bullion has, of course, to be actually moved to Tower Hill sometimes, for coinage purposes, and sometimes to Scotland and Ireland and the provinces.

5293. So that we came to this, that bullion is not used in the wholesale transactions of commerce?—Is not handled, usually, except for export, and for special purposes. Then your cheque is actually paid in sovereigns or bars.

5294. You say it is a right which is seldom exercised; but, I suppose, it might be exercised at any moment, and you must therefore keep a certain reserve in case it should be exercised?—Yes, that is why we should keep a stock of gold, even if the law did not compel us. The Banking Department keeps a reserve, mostly notes, sufficient to meet the demands upon it; the Issue Department has, of course, a reserve of gold sufficient to meet the notes held by the bank and by the rest of the public.

5295. As a matter of fact, except in case of extreme panic, you never do come near the point where people do require the gold?—Even then it would not be that they required the gold instead of notes for their business; they would require it only in consequence of their fears. The hoarding, however, that has occurred in my time has been note-hoarding, not gold hoarding; but the effect of either would be nearly the same.

5296. They are afraid that it may come to the point at which they may be obliged to ask for it?—That is it.

5297. And the amount which you are obliged to keep at the bank depends really, or very much, upon what people think it necessary should be kept there in order to alleviate their fears?—Yes, we have, no doubt, to keep more (if you are referring to our banking reserve), owing to the publication of the accounts of our banking department. The public would know nothing about it if it were not for that. The stock of bullion in the Issue Department is held in accordance with the provisions of the Act of 1844.

5298. Well, now come again to the point how an increased or diminished supply of the precious metals operates. Would it operate on sales through the cash in the hands of the public, or through the gold contained in the bank reserves, or does it only operate indirectly by altering the value of gold considered as a standard of value?—I should say its ultimate operation is through the mass of gold considered as a measure of value. Its immediate operation is through spending power, by which I mean not extravagance only, but all spending, and especially reproductive spending. The stock of gold in the bank is only a cistern. Increase or diminution of production of gold affect it for the moment, but they do not at all govern the level at which it is kept.

5299. Then I would only ask you, if the operation of an increased or diminished supply of gold is indirectly, but only indirectly, felt in wholesale transactions, whether it ought not to be felt more directly in retail transactions and in payment of wages, where gold is really used, should it not, than in wholesale transactions, where it is not used?—No, I should say it ought not. Wages are not raised by means of currency, that is, of cash going about in the hands of the public, but by an increase of the wage fund.

5300. Then you do not think that the increased or the diminished supply of gold operates on prices through the circulating medium in the hands of the public?—It operates by the spending power. The fact of the public wanting more cash at one moment to meet its engagements at a certain time, as in Scotland for example, does not affect wages; wages affect that rather.

5301. But I am speaking now rather of an increased or a diminished supply of the precious metals?—By increase of power of spending, not by the presence of this or that quantity in the hands of the public.

5302. Will that not depend upon circumstances?—Yes.

5303. In Australia the increase of the quantity of gold increased miners' wages, and that was the beginning of the rise of all prices, was it not?—In Australia it increased everything, not wages only; nor did it begin with wages. It began by the man who was wont to earn wages leaving his work and going to find gold, and finding better pay by working for himself than for his quondam master. Then the master found that if he must have his horse groomed he must pay higher wages. I have explained before how it affected the rest of the world. Q. 4675.

5304. But I want to know what would be the effect in this country, suppose you have an increased quantity of gold. Would it affect retail prices directly or only through wholesale prices?—No, only through wholesale prices, I should say.

5305. Where is the gold to be found in England?—In the vaults of the Bank of England it is most in evidence, but there has been said to be 100,000,000*l.* in coin in England. It is doubtful whether there is so much.

5306. That is partly in circulation, and goes to pay retail prices and wages?—Yes.

5307. And you have said that you think that the effect of an increased or a diminished supply of gold would not be felt directly in that portion of it?—I say it would not be felt in that way. Wages do not rise in Europe by the mere fact of gold being found in Australia, but by the gradual increase of spending power. It is probable that the coin in the pockets of the people would be again approaching its normal amount, which is now said to be diminished; but that depends on activity of business.

5308. And more cash at the bankers would not make wages rise?—More cash in that particular deposit would not of itself make them rise.

5309. Therefore it is not to the use of the gold in the hands of the public that we are to look for the effect of an increased or a diminished supply upon prices. The gold that acts upon prices you would rather expect to find in the banking reserves?—No; I have already said that it is not by the mere presence of gold in the hands of the public. It is by their having more at their credit to spend. If they consequently paid more wages, they would, as a further consequence, have more money in circulation.

5310. I want to know whether it is to the whole amount of gold in the bank that we are to look for an effect upon prices; we are now dealing with the quantity of gold, and I want to know whether we are to look to the bank cellars for the effective quantity?—You are looking in vain for some great reservoir which should be permanently filled by a great find of gold, or depleted by the falling off of production. I have explained that the action is one of gradual diffusion. What I mean is this: suppose there are 120,000,000*l.* of gold found in Australia, Africa, or elsewhere; it comes to the Bank of England; that is the natural course. That of itself does not increase wages merely because it is there. It may have a momentary effect upon the rate of discount and so a momentary effect upon prices, but what it will do is to leave something behind it. It either belongs to some person here who has made a speculation in Australian mines, or it is a certain amount of commission which remains from the sale of that commodity, gold, which may have been consigned to him, giving him in either case increased spending power. That is the way in which the thing operates.

5311. And in that way the bringing of silver to the assistance of gold would place a larger amount of standard metal in the bank reserves, and in that way would operate upon business in the way which you have described?—Yes, but that is only a temporary operation, acting, as I have said, upon the rate of discount. It might be more easy if gold and silver were both of them money here, to withdraw gold or silver from another country, thus giving an additional facility for bringing bullion to this country; but I say it is not the fact that the discovery of the precious metals operates ultimately through the stock of gold in the bank; it operates through the change of proportion between the commodities existing and the bullion existing.

5312. It operates as a standard of value?—As a measure of value.

5313. At any rate, if we are to look for the quantity of gold which is available, it is to the banking reserve that we should look, is it not? If we are to look for any standard or mode of testing the quantity of gold that is available for the purposes of raising prices, we should look to the bank reserve, and not to any other place?—No, I should say not. The gold in the Issue Department of the Bank of England (which is what I suppose you to mean by the bank reserve) is not the thing that regulates or is even an index of the quantity of gold as a measure of commodities. I think the largest amount of gold in the bank was somewhere about 1876, when certainly the production was not much greater.

5314. I want to get to this point; if there has been a physical scarcity of gold, that scarcity ought to be seen somewhere or another; I want to find the actual fact of a scarcity of gold. Where shall we find that; how can we test the quantity of gold?—We can test the quantity of gold simply by knowing how much is produced, and what is the amount of wear and tear.

5315. Then there is no reservoir in the world?—No, certainly not; because the only gold that may be said to be in reservoirs is that which goes back again, so to speak, into the mines, as I have frequently said; that is to say, goes into hoards, or may go into hoards.

5316. Is it available when it is in hoards; does it alter the standard of value when it is in hoards?—It may be said to be put back into the mines, with only this difference, that the mine is one that is extremely easily worked. Just in proportion as it is easily worked, so it must have an effect on prices.

5317. But, for the moment, it has not an effect upon prices?—Not unless it is, as I say, very easily to be had.

5318. We have seen that it can be got at?—Yes.

5319. But in their immediate effect upon a standard of value we might put hoards out of consideration, might we not?—I think we might; some hoards, certainly. Let me instance it by one thing. It is said that the German Government has in Spandau some 12,000,000*l.* sterling. You may call that a hoard if you like, but at the same time, in the event of an outbreak of war, that would cease to be a hoard.

5320. Would you say that that hoard affected gold as a standard of value?—It is extremely difficult to measure; it is the degree of its attainability, and the knowledge of it, which would determine that.

5321. But there are certain commercial reservoirs in which the gold is known to be available, and in which it certainly has a commercial value?—Yes, the gold is not only available but in use.

5322. Have you examined the state of those reservoirs before and after the time of the demonetisation of silver?—Yes.

5323. I think Mr. Soetbeer gives us the total gold reserves of the principal countries of the world. In 1877 it was 144,500,000*l.*, and in 1885, 252,000,000*l.*?—Yes.

5324. Therefore the available reserves of gold in the world had very much increased during that time?—The amount of reserves of gold in banks and elsewhere do not clearly bear upon the question. The visible stocks of gold may have increased, inasmuch as there seems to be a tendency, at least on the Continent, to centralise more and more the gold in the country in the reservoirs of the banks. Here, again, supposing that we issued 1*l.* notes against gold,

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the reserve in *our* tank, the Issue Department, would be increased, but the total amount of gold in England would be unaffected. The amount of reserves in banks depend, as I have said, on many things besides the quantum of the measure of value. The 12,000,000*l.* which Mr. Pierson says exists in Spandau as a reserve for war purposes is in the nature of a hoard, and probably does not affect the mass of the measure, and consequently, prices. Now, the average stock of gold in the Bank of England in both departments in 1879 was 32,000,000*l.*; in 1880 it was 26,000,000*l.*; in 1881 it was 24,500,000*l.*; in 1882 it was 22,000,000*l.*; in 1883 it was about the same; in 1884 it was 22,000,000*l.*; and in 1885 it was 24,000,000*l.* The fiduciary issue of notes in the whole country has been reduced, or the gold would have been less.

5325. At any rate you will admit this, that taking the whole of the available reserves that we know of, according to the best statisticians, the whole of these reserves which are known to be available for the purposes of commerce and exchange, they are larger considerably now than they were in 1877?—Dr. Soetbeer says so. I cannot say of my own knowledge. I can only tell what the case was in the Bank of England, where they were much larger then than now.

5326. In the Bank of England the reserves are as large as they were?—No, they are not. In 1876 the stock of gold in the Issue Department was very much higher. The average was about 30,000,000*l.* and the highest point 34,206,000*l.*

5327. They were just temporarily, but taking the period before the demonetisation of silver and the present period, the reserves are as large now as they were, are they not?—It was not temporary; the stock of gold in the Issue Department was 25,000,000*l.* in April 1876, and 34,200,000*l.* on September 1879. The highest point in the several successive years, 1878–86 was in round numbers 26, 34, 28, 27, 23, 24, 34, 27, and 22 millions. It is now 23 millions, not differing greatly from the average of the years before demonetisation. The highest points in 1867–75 were 24, 22, 20, 22, 27, 25, 24, 23, and 29 millions respectively.

5328. Well, then, I come to a further question. You protect your gold by raising the rate of interest?—Certainly.

5329. Have you had any greater difficulty in doing this since the fall in silver began than before?—No, there is a difference in the rates which will be successful in getting gold from France, but there is no difficulty at all.

5330. Have you had to raise the rate of interest higher?—No, it is lower, as is always the case in a depressed state of trade. The average of the decade ending 1872 was 4*l.* 2*s.* 10*d.* per cent., and of that ending 1882, 3*l.* 7*s.* 10*d.*

5331. (*Mr. Courtney.*) How do you get those averages?—I take them from our returns.

5332. What I mean is this, do you take into account the time during which your rate runs?—It is an average rate.

5333. Supposing you had got a 3 per cent. rate of discount for nine months in the year and 4 per cent. for three months in the year, what is the average rate in the year?—I cannot say off hand; I have taken the average.

5334. (*Sir T. Farrer.*) Since the demonetisation of silver the rate of interest has on the average been lower than it was before?—The rate of interest here has been lower than it was before.

5335. Has the rate of interest been more frequently changed than it was before the demonetisation of silver?—No, the changes in the decade ending 1872 were 103, and in that ending 1882, 90. The rate of interest has, I consider, no practical significance in the question before us. It is, however, remarkable that the changes in 1873 were 24, very much larger than in any year since 1844.

5335*a*. That was the time of the special German demand for gold, was it not?—Yes.

5336. The rate of interest is the weapon with which different countries "struggle," as it is said, for gold?—It is one of the weapons, and one to which we constantly resort. It is not at all necessary that rates should be high to protect our reserve. It suffices that they should be higher here than in other gold-using countries, taking into account the normal rate of interest in each.

5337. Then do you find that there has been any greater difficulty in maintaining this reserve, that we have had to pay rather a higher price for it since the demonetisation of silver than before?—No, I have shown that it is less.

5338. So that there has been no difficulty whatever in maintaining the reserve?—No, none at all.

5339. The rate of interest in the event of a scarcity of gold is the price that is paid for the use of gold?—Is the price that is paid not so much for the use of somebody else's capital, as for the use of your own capital earlier than you have a right to have it.

5340. (*Chairman.*) Is it not that he gives you his gold, he getting the right to receive your gold at a later date?—Of course, that is another description of the same thing.

5341. (*Mr. Courtney.*) A more accurate one?—Yes, perhaps it is; but the Chairman's phrase is the description of a mere borrowing with no security. "Here is something," you say, "that is due to me on "the 1st of July. Please let me have it before the "1st of July," the banker does so, and you pay him in accordance with the time.

5342. (*Sir T. Farrer.*) Whichever is the better description, the rate of interest is the price which you pay for the use of the gold in the meantime?—For the temporary use of the capital.

5343. Well, the price of a thing is generally the measure of its scarcity, is it not?—Yes, but there is the fallacy into which you are falling. You say, rightly, the rate is the price you pay for *the use* of the gold; and then, premising that the price of a thing is the measure of its scarcity, deduce from the low price of the accommodation the conclusion that the gold *itself* is not scarce, that gold is cheap and not dear. If there were but two ploughs in a district, ploughs would cost the same, and be as scarce and dear, though by reason of the ploughing season being nearly over, and most of the land being turned into pasture, the demand was slack, and the charge for their hire little. You speak of the scarcity of gold, whereas it is not the scarcity of gold that is in question at all in respect of the rate of interest. There may be an abundance of gold, and yet you may have to pay a large price for the accommodation you want. There may be an abundance of gold in the world, but yet to borrow the money wherewith to pay your bills you may have to pay a large price, depending on the demand that there may be all through, depending upon the means that your bankers have to help you over that stile.

5344. (*Mr. Birch.*) Surely one of the objects of raising the rate is to attract gold?—Certainly, that is what I say.

5345. Yes; but I think you said that you only attracted it before its time. Sometimes the object of the Bank of England in raising the rate is to produce this effect, that securities fall, and money comes to be invested in this country, other people's money from abroad too?—I said nothing about attracting it before its time. I said that in sending in bills for discount, I obtained before its time a sum due to me. What you say is right, but it is quite another thing.

5346. It is attracting the gold?—Yes; that is the action of the Bank of England. I was speaking of what the operation was of obtaining payment of a bill under discount. It is not the *gold* that we buy in discounting our bills; it is the accommodation that we buy, and facts show us, as clearly as possible, that it does not depend upon the amount of the stock or production of gold in the world what the rate of interest is.

5347. Not the amount of the production of gold,

but the amount of gold that there is available to come over here if we want it. Does not raising the rate attract gold?—Certainly; but that may be perfectly the case, although gold may be deficient in England, yet gold in one or the other part of the world may be abundant, and may come here. The rate of interest may be higher here, and, therefore, people will send the gold if they have it in their possession, even though the quantity in the world is small in proportion to the demands on it.

5348. You know we are speaking of gold as a measure of value, that is a comparison between the amount of gold and commodities?—The question has now been turned upon the rate of interest, upon the greater or less demand for the temporary use of the commodity. It is not only I, but every economist has said the same; the rate of interest has nothing whatever to do with the scarcity of the precious metals. It has to do with the scarcity in your pocket when you want to borrow, but it has nothing to do with the scarcity in the world.

5349. (*Sir T. Farrer.*) It is notorious that under many circumstances the rate of interest has absolutely nothing to do with the supply of gold; but it is no less clear that there are certain periods in which you want that particular commodity, gold, and in those times you get it by paying a higher price for the use of it, is that not so?—You speak here of gold as if it was a commodity which you wanted to buy. How much, then, do you give for a a hundred sovereigns in such a transaction as that of which you speak? The rate of interest is 2 %, but the 40*s.* is not the price of the 100 sovereigns. You say quite rightly in the same question that it is what you pay for the *use* of them. It is credit, not gold, that you want. You want to pay your bills, that is all, and you have got no money. It is the Bank, not the merchant, that wants gold to replenish its reserve of notes; and it gets it, not by paying (as you think) a higher price for the use of it, but by charging a higher price for its discounts.

5350. Well now, what are the means which you employ for getting gold when you want it, or keeping gold when you wish to prevent its going away?—We (I mean the Bank of England) are not obliged to lend. By raising the rate we say, in effect, "we will not lend." Somebody may say, "I must have the loan." Then we say, "well, you must pay for it," that is, pay for credit, pay for having some more money put to your credit. Your contention is all the less tenable by you because it is an argument that in borrowing money we buy gold, whereas in former questions you have maintained that even when we sell commodities and do buy gold, no gold passes.

5351. I am asking really for information. What is the effect and operation of your raising the rate of interest in getting gold from foreign countries?—I suppose one may say it is that then the rate of interest is better for them here than it is abroad. That is the ultimate result of it. They send gold because they will be able to dispose of the money more advantageously, but there are manifold steps and lines through which that passes. It is sent here as an exchange operation. That is, gold may be sent without any special intention of investing that gold, or it may be sent with an intention of investing the gold, but from the belief that the gold will be wanted, and from the belief on the part of the sender, the man who operates in bullion, that a good exchange operation can be made by sending it. That is to say, that the bills will be sent to him as a counter-remittance under advantageous circumstances.

5352. But if there was really this scarcity of gold or a difficulty in obtaining it, and if there was, as we have heard stated, a "struggle" for gold, would you not expect that since this demonetisation of silver which is said to have caused the scarcity of gold, you would have had a greater difficulty in getting it, and that you would have had to pay more for it?—Yes, if it were really a purchase of gold; but I repeat that it is no such thing; and I repeat what I have already said, that the rate of interest depends not upon the quantity of gold in the world but upon the briskness or slackness of business. Business ever since that time has been extremely slack, therefore, as has been always the case in slack times of business, the rate of interest is low. Even if the effect of the scarcity, *i.e.*, its more extended use, in Italy, Germany, and elsewhere, should naturally have been to make the price of the temporary loan of capital greater, this would be counteracted by the slackness of business.

5353. But then I thought you told me that the business was slack because there was a deficiency of gold?—Yes, amongst other causes.

5354. We are talking of appreciation of gold alone now. You told me that the depression in trade is due to a want of gold?—Yes, in part. I should put it, more correctly, to a diminution of the measure of value in the gold-using countries, as compared to the commodities measured.

5355. And then when I point out that there is no want of gold, and that there is an abundance of gold, you say that the abundance of gold is due to depression of trade?—I must reply that you have not pointed out that there is no want of gold, or that there is abundance of gold. You have urged that there is a lack of demand for loans, and a consequent cheapness of accommodation, which is a wholly different thing. Interest will always be low when trade is bad. I say that depression of trade is partly caused by a falling off in the amount of gold in the world; by the failure of gold to meet the demands upon it.

5356. Then when I point out that so far as we can see in any possible quarter there is abundance of gold, and that there is not the least difficulty in maintaining that abundance, you tell me it is due to depression of trade?—But I do not say, and I repeat that you have nowhere shown, that there is an abundance of gold. You say, look at the stocks of gold in the Bank of England and in other countries, and you assume that to be an index, but I deny that that is an index; it is not the least an index of the amount of gold in the world.

5357. Then I ask you where do we find this scarcity?—You find the scarcity in the fact that the needful amount has not been produced, and that there have been greater demands on the commodity.

5358. You find the effect in the fall of prices, but you do not find it in any visible reserves, or in any difficulty in maintaining those reserves?—There is no difficulty in attracting gold, but that gold must come from somewhere else, it must be taken away from somebody else. If at any given time we have a large stock of bullion, it does not follow that other people have a large stock also. You cannot take the stock held by the one bank or the other as an index of the gold in the world. The stock of gold in the Bank of England is really an index of the need of the public for notes. The point is that gold is not being produced in large quantities, and is more in use than it was.

5359. I am not talking about the production now; we are talking about the visible supplies throughout the world?—Well, I say I cannot answer about visible supplies, because I do not think the stocks of bullion held by any bank are a sufficient ground for building any superstructure of that kind, and I very much doubt your finding any one who knows anything about the working of the Bank of England, and who will tell you that they are.

5360. Then you do not think that there is any place in the world in which we may look for the quantity of gold existing, in order to test the allegation that there is a failure in the quantity of it to meet the demand?—How is it possible that there should be anywhere such a permanent reservoir which should be an index of the amount existing in its own and other countries? I look at the returns of the gold that comes in, and I see that there is a failure, there is less produced than there used to be, in proportion to what is needed.

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5361. There is no evidence of there being any great "struggle" for gold between the nations?—I think there is.

5362. But not more since 1873?—Yes; France locks up its gold and does not part with it. You say the rate of interest is the weapon with which the nations must struggle. It is one of the weapons; but it is not the only one; a strong lock and key is another.

5363. I am glad you mentioned that point. The gold in the Bank of England is thoroughly available for commercial purposes?—Surely.

5364. Except so far as it is required to be kept against notes which are out?—That gold also is thoroughly available, and is in fact continually employed, through notes, for commercial purposes.

5365. Can the gold in the Bank of France or the Bank of Germany be got at in the same way as the gold in the Bank of England?—Not quite with the same ease, because gold is not only *a* legal tender in this country as it is in those, but is the only legal tender in this country.

5366. With the exception of the gold in Spandau, the gold in Germany is in the banks?—It may be so, but I do not know it.

5367. And it is so in the United States?—I do not know how it may be in the United States, but in France it cannot be absolutely demanded because it is a bimetallic country, and they have a right to give which metal they like.

5368. (*Mr. Fremantle.*) But the United States is also a bimetallic country now?—The United States is, like France, a bimetallic country with a lame standard. I am told that they withhold their gold, which would otherwise flow hither; but I cannot say for certain. I wish to read, as to Sir Thomas Farrer's qualification of what I said about the rate of interest having nothing to do with it, a few lines of what Mill says:—"The rate of interest bears no "necessary relation to the quantity or value of money "in circulation. The permanent amount of the "circulating medium, whether great or small, affects "only prices, not the rate of interest. A depreciation "of the currency, when it has become an accom-"plished fact, affects the rate of interest in no manner "whatever. It diminishes, indeed, the power of "money to buy commodities, but not the power of "money to buy money."

5369. (*Mr. Birch.*) If Mill had been alive in 1873 I think he would have thought differently, would he not?—He might have thought differently in many things, but I do not think such speculations on dead men's progress of opinion will really help us.

5370. (*Mr. Courtney.*) You lay stress upon the qualification, "when it has become an accomplished fact"; these are the important words in the statement?—They are not the only important words. I, however, made the very same distinction, because I said all increase or diminution of the currency comes primarily in that way; it is poured into that cistern, gets distributed, and when distributed acts uniformly upon prices.

5371. (*Mr. Birch.*) Under certain circumstances the question of the commercial demand has nothing whatever to do with it. You may remember, in the year 1873, the Bank of England, finding that bills were drawn in France, in Switzerland, and in other parts of the world upon England, recognised that this was the means France was adopting to obtain gold to pay her indemnity to Germany; it had nothing whatever to do with trading operations. To avoid losing too much gold we raised the rate continually; we refused to discount some of these first-class bills; we put the rate at 9 per cent. and that had the result of checking this class of operations, and we held our own afterwards?—I was deputy-governor at the time of which you speak, and I am therefore thoroughly cognisant of the circumstances. I make no question, of course, that there were many financial bills; but when you say they were not commercial bills, you speak in a restricted sense of the word. I speak of the whole commerce of England, whether of goods, produce, securities, finance, or of anything else, and of that commerce these bills certainly formed a part. They must have involved indebtedness, and formed an item in international indebtedness of England.

5372. They were what we call financial bills?—But even these must have been drawn on indebtedness, indebtedness past, present, or future, of A to B. There are plenty of "kites" that rest on nothing and mean nothing when they are issued, but a time comes when they must mean something, and must be paid.

5373. At that time the process was this: they drew bills on England to obtain gold on credit, and had to repay when the bills fell due?—But they must have been drawn upon merchants or traders, and formed part of the commercial transactions of those merchants or traders.

5374. (*Sir T. Farrer.*) You referred very frequently to the falling off in supply. I want to ask you a question or two about that. The question of supply is not one of annual supply, is it?—No.

5375. It is a question of the stock which remains?—Certainly.

5376. Since it is not consumed as other articles are?—Certainly.

5377. I find in Dr. Soetbeer and other authorities that during the period from 1493 to 1850, which was 358 years, there were 660,000,000*l.* of gold produced. I also find that from 1851 to 1885, which was 35 years, or about one-tenth of the previous period, 890,000,000*l.*, that is nearly 900,000,000*l.*, of gold was produced. In other words, during the last 35 years about $1\frac{1}{3}$ of the whole previous supply was produced. Well, now, of the stocks in existence during the earlier period a very considerable portion must have gone, as you say, back in to the mines, in some way or other lost, hoarded or consumed, and much more during that longer period of 358 years than during the shorter period of 35 years?—Yes, if your figures are right.

5378. Consequently, the real proportion of the addition to the world's stock of gold during those last 35 years must have been very considerably more than $1\frac{1}{3}$, probably 200 per cent. The exact amount is, of course, uncertain, but it was an enormous addition. We have thus got some notion of the supply. Now the demand is, first of all, for the use in arts and in hoarding; secondly, for use in currency; and those are the ordinary demands; and, with regard to currency, we have had a long discussion upon expedients to save currency which I will not go into again; then as regards extraordinary demands we have what is so much relied on by those who think that there is a scarcity of gold, viz., the demands made by Germany, the United States, Italy, and other countries, and those are put by the statisticians we have had before us at about 200,000,000*l.* Well now, supposing we treat that 200,000,000*l.* as a wholly new demand, and supposing that we treat it as absolutely absorbed and taken away; and suppose we deduct it from the 890,000,000*l.* added to the stock of gold between 1850 and 1885, it leaves us 690,000,000*l.*, or a good deal more than the whole amount produced in the previous 358 years, to meet the growing ordinary demands of the last 35 years. Now, do you think those figures look like a failure in the stock of gold to meet the demands upon it?—Dr. Soetbeer's calculation is not universally accepted, but we may take it to accord with your figures. They relate to production of the metal; but the computation of the gold *money* (coin and bullion) existing is more germane to our question. Seyd gives the total at the beginning of 1878 as 830,000,000*l.*, by which time 220,000,000*l.*, or more than one-fourth of the whole, had been set to do new work in Germany and elsewhere. But be the figures of production or of money what they may, my view is this: We may presume that the stock between 1851 and 1873 was, at some time, sufficient for the needs of commerce in the then gold-using countries; and I urge that since

that time the production has been little more than enough to compensate for wear and tear, and to supply the demand for use in the arts, leaving scarcely anything to meet the increase of population and trade, and that as a great additional demand for money purposes has arisen the proportion between the measure and the things measured has been gravely altered. It may be well to add here an independent calculation of the stock, as well of the precious metals as a whole, as of the quantity in use as money. It is taken from the Journal of the Institute of Bankers, Vol. VII., pt. 3.

ESTIMATED STOCK OF GOLD AND SILVER IN THE WORLD, being a combination of Sir Hector Hay's estimates of production since 1848, with Mr. E. Seyd's estimates prior to that date.

	£	£	£	£
Prior to 1429. Stock of money (gold and silver) supposed to be in existence in the world in the year 1492, according to Mr. Seyd.			180,000,000	
		Gold.		Silver.
1493 to 1848. Production of gold and silver during this period according to Mr. Seyd.		640,000,000		1,200,000,000
Estamated cost of coin, &c. in 1848, including previous stock and allowing for use in manufactures, loss, &c., according to Mr. Seyd.		400,000,000		580,000,000
1849 to 1885. Production of gold and silver during this period, according to Sir H. Hay.	810,000,000		480,000,000	
Less, estimated consumption in manufactures, loss, &c. at the rate of 8,000,000*l.* a year of gold and 4,000,000*l.* a year of silver.	300,000,000	510,000,000	150,000,000	330,000,000
		910,000,000		910,000,000
Or, gold and silver together - -			1,820,000,000	

This whole argument touches only the question of fall of prices, and leaves untouched that of the destruction of the common measure.

5379. Well, you propose to do what would raise the value of silver to the present holders of that metal by, say, 25 per cent.?—Yes, I should say it would, measured in gold. For example, supposing I held 1,000 ounces of silver, I should be so much the richer if I sold it then than I should be if I sold it now, and the person who bought it would be just in the same position as myself afterwards; my silver would have got more purchasing power, which would be as available in his hands as it had come to be in mine.

5380. We have heard from a witness that the remonetisation of the trade dollar in America has put 150,000 dollars into the pockets of the holders of silver?—I do not know anything about that. I should like to see the account made up with interest.

5381. The man who told us said that he himself had done it?—Even then I should like to see the account, because I should like to see whether he had debited himself with interest all the time he held the trade dollar.

5382. (*Mr. Fremantle.*) He did not hold the trade dollars; he had them in his business in China where they were circulating. As soon as he could get the price for them in America he sent them back there. Was not that the case?—In any case the question of interest comes in, and the question of the purchasing power of the trade dollars in China, *i.e.*, what they had cost him. Those broad statements of what one has made always require to be scrutinised.

5383. (*Sir T. Farrer.*) Then you would alter existing contracts to whatever extent you alter the value of gold?—Well, as regards the alteration of existing contracts there is a great deal to be said, I think. In any case where you are altering a positive contract and can show that an absolute loss has been incurred by somebody, a thing that you know well beforehand, of course the State must take continual care not to do harm to one party to the contract, or, if it does do him harm, to make compensation; but even in that case our rulers have not always been so extremely careful upon the subject, because where there have been absolute contracts, the *salus populi*, or what has at the time seemed to be *salus populi*, has induced the State to do things which otherwise, I suppose, they would not have done; but when it is a case such as this is, where the loss or gain in the matter of price, and of increase of the purchasing power or diminution of the purchasing power of the metals concerned is merely conjectural, when nobody can say what it is and what it is not; then I think one must look with very different eyes upon the supposed alteration of contracts. I said before that in 1797 and in 1816 there were acts done by this country which obviously and clearly did alter contracts, some of them more and some of them less. Every legislative act has a tendency to alter contracts. When free trade was established that undoubtedly must have altered contracts. You must not bring back protection if it is immoral to alter contracts, not only because protection may be unwise and immoral in itself, but because you are altering contracts. You ought not to endeavour to get rid of the bounties on foreign sugar, because you may very considerably alter contracts in this country if you succeed in doing it, and yet every successive Government has done its best to get them abolished. You must not make war either, because that alters contracts extremely, and if you have made war, you have certainly no right to make peace, because the peace will certainly alter contracts. You must not issue a new loan in consols, because that will alter contracts, nor must you reduce the interest on the national debt, because that again must alter contracts considerably. A Chancellor of the Exchequer who proposes to pay off the national debt by so many millions a year alters many contracts in consols; so does he who finds reason to refuse to do so; both act alike immorally, if that argument is good.

5384. Would you say that the establishment of bimetallism operates to put an end to the advantage which the Indian producer is said to gain by the fall in exchange, and would that, in your opinion, be an injustice to India?—I wished you to ask me that, because I said a good deal, I think, in my first day's examination upon the effect on the producer in Chili of the depreciated currency, and I argued from that, and I suppose I rightly argued from that, that that same effect in a different degree must be produced in India on the producer on account of his having a depreciated currency. Well now, it has been urged, and not infrequently urged, that you must not make this bimetallic law, because you will do away with that advantage. I say, then, am I to consider that it is an advantage to India that the producer should gain? If so it is an advantage which he gains simply by the depreciation of the currency, and I do not

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think we will find any economist in this country say that it is an advantage to the country at large to have a depreciated currency. Is it an advantage to Chili?—The Chilians think not. The Chilian producers think it is a great advantage to them. I have been one of them, but the people in Chili themselves do not think so, and I learn since my former evidence that they have passed a law for the prospective resumption of specie payments there. But if it is a good thing, and if it is an advantage to have a depreciated currency in silver, so it is in paper, and so also it must be an advantage to have an inconvertible currency, and if in Chili, then here also; and that I think the objectors will shrink from maintaining.

5385. (*Mr. Birch.*) But how would you separate the producer in Chili from the Chilians. He is a Chili man?—Yes, but he is not the whole country. The question is whether the depreciation of currency is a benefit to the country at large, and I say most certainly it is not; but if it is, let us have an inconvertible currency here. We should very soon ruin the trade of the country, but we should give perhaps some temporary advantage to trade. I say it is not a gain to a country to have a depreciated currency, but it is a gain to individuals at the expense of their neighbours, and the moral of that is that I do not think that we should listen to the argument that it is an unjustifiable thing to do away with the depreciated currency, and incumbent on us to reject a measure which might have that effect.

5386. (*Chairman.*) Are the two cases precisely parallel of a country which has a currency which is of less value in relation to gold and a country which has a depreciated currency in this sense, that it is using paper based it is true upon one or other of the precious metals, but the changes in the value of which paper depend upon the changes in credit of the country very much?—Though the character and estimation of such a currency depends in some degree upon the belief that it will ultimately be redeemed in silver or gold, its value must depend upon the amount of issue; that is to say, over issues will destroy it; the two kinds of currency are not the same, but they move on the same lines, only one is further advanced than the other. Both of them are in different degrees bad remittance to a gold-using country; one is useless, the other of uncertain value.

5387. I mean the evil from a depreciated currency in the ordinary sense, paper currency, we will suppose is very much greater any than evil that may arise merely from a variation in the relation which the currency of a country which uses one of the precious metals bears to another country using another of the precious metals?—There is a great deal of difference, but they are both the same in this, that the stuff that is used for money in the country is either valueless or of less value than in others; it is only a question of degree, a very important question of degree, but still only of degree, because very often in paper currencies, in Chili for example, the difference is not nearly so great as it is in some others. In Peru for instance, the dollar is worth 2*d.*; in Chili it is worth 2*s.*, or a little more than 2*s.*; and I suppose there will be an alteration in the exchange in accordance with the proposal to resume specie payments at some distant but definite time.

5388. (*Mr. Houldsworth.*) Is there not a difference in the action of a decrease in the supply of the precious metals and an increase of demand for them for currency purposes as affecting prices? In your answer 4682 you tell us that an increased supply of gold affects prices by creating more spending power. A decreased supply therefore reduces the spending power. But how does an increased demand for currency purposes reduce the spending power?—I may best answer this question by assuming the opposite supposition. Let all demands for gold for currency purposes cease in all the world except in England, *i.e.*, let gold be demonetised everywhere else. Can it be contended that the 800,000,000*l.* or 900,000,000*l.* which would or might be poured into England would not be collectively a different measure of commodities bought and sold by us in England, from the 100,000,000*l.* or so which we now have? Would not prices necessarily rise? There would not necessarily be additional wealth in our possession, though there might be, but there would certainly be additional gold-spending power. In the case formerly supposed (4682) the spending power obviously arose from greater wealth having been poured out; but that spending power was only the agent for spreading over the world the sum added to the measure. In the case now supposed, the demonetisers of gold would have to sell the metal, getting less and less for it. They would thus lose spending power, and the purchasers of the gold would gain it. But even without that, gold would naturally converge upon England. England would be "overwhelmed" with gold, to use the language of some monometallists. In other words, prices would rise. The course of the opposite case is, perhaps, not so easy to explain, but as it goes exactly on all fours with this, it must lead to exactly the opposite result. If there were no gold in the world but that within the four seas, silver being the money elsewhere, and other nations monetised gold, is it conceivable that our 100,000,000*l.* could serve for the measure of all, without disturbance of price? Spending power would certainly be diminished in the world, for the other countries would sell the silver which was formerly their measure and served them as well as a certain proportion of gold would do, for a much less proportion, and would be heavily the losers. It has been argued that the 100,000,000*l.*, whether in gold or in bars or ornaments, does not disappear; it is still there, and why, therefore, should prices be affected? The above examples show that they must be, and make it probable that the means by which they are affected is the loss of spending power.

5389. It has been said, I think, that as population increases more gold (in a gold-using country) is wanted, and if it is not obtained prices will fall. Can you shortly explain this?—It will be made clearer if we suppose the addition to population to be the adoption of gold by a country not before using it, *e.g.*, let Ireland, having had no gold, take to using it. The quantity of gold is constant, Ireland must buy it with commodities, but England and Scotland have only what they need, and do not want to part with it, and while the Irish would bribe them with a larger amount of commodities, *i.e.*, by reducing prices, they also reduce prices and thus the gold suffices for all. I say "what they need," but it is only needed as a measure and prices being once reduced, the level once found, the smaller quantity serves as well as the larger. Now suppose the addition to be a simple increase of population, and consequently of need for commodities. The same force must act, every additional person must have something wherewith to buy; and if no more gold is to be had wherewith to measure commodities, the existing gold measure must stretch, *i.e.*, prices must fall.

5390. Take the reverse case. Suppose the amount of gold to remain the same, and suppose the population decreased suddenly by one half, would prices rise?—Yes.

5391–95. Why?—The quantity of gold is constant, and is in the hands of the remaining half of the population, and is used by them in the purchase of commodities. You must assume that half the commodities have been destroyed as well as half the population (or else you must allow time to elapse, and cessation of production to reduce commodities to that level). It is evident then that the half population, having the same spending power that the whole population used to have, will bid against one another for commodities, so that prices must rise. It is for them tantamount to a new discovery of gold, and the process shown in my answers to Q. 4675 and 4682 comes in.

5396. (*Mr. Fremantle.*) You said that the supply of gold in 1873 was only sufficient for the wants

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of the world. What would have happened, in your opinion, if there had been no gold discoveries in 1850?—I did not mean to say that they were only sufficient, or even to assert their sufficiency. I meant I put that as a supposition, sufficient for the wants of the gold-using world; but if there had been no gold discoveries, what, you ask, would have been the effect? The effect would have been that prices would have gone on, steadily, steadily falling, and wear and tear and loss would have devoured the gold as the population increased, if it did increase.

5397. As there has been so enormous an addition to the stock of gold since 1850, is it not difficult to argue that there is a scarcity of gold in the world?—Unless the population has increased so as to demand more, and unless the uses to which gold has been put are greater than they were before, that is to say, unless there is now a greater amount of commodities, a much greater amount of commodities which the same foot rule has to measure.

5398. Were there not apprehensions as to the effect of the gold discoveries in 1850?—Certainly.

5399. Was the trade of the world not much less disturbed than had been anticipated?—Very much; because all that happened was the natural production of gold; there was then no disturbance of the par of exchange between countries.

5400. Was there not a very great disturbance in the relative mass of the precious metals in the world?—A very great addition. Yet there was scarcely any effect felt in France, and the price of silver in gold countries scarcely varied. The figures that I put in have a very different bearing from those which Sir Thomas Farrer quoted. What I say is that from 1803 to 1873 572,000,000*l.* of gold and 227,000,000*l.* of silver were produced.

Witness withdrew.

Adjourned till Friday.

Twenty-second Day.

Friday, May 20th, 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. J. CHAMBERLAIN, M.P.
MR. HENRY CHAPLIN, M.P.
MR. L. COURTNEY, M.P.
SIR THOMAS H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.
MR. W. H. HOULDSWORTH, M.P.

MR. GEO. H. MURRAY, *Secretary.*

Mr. J. SHIELD NICHOLSON recalled and examined.

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5401. (*Mr. Barbour.*) You said in your previous evidence that you thought the reason why silver fell so little relatively to gold in the 16th century, notwithstanding the large increase in the production of silver, was because silver was then freely coined in Europe. I believe that at that time ratios between gold and silver for legal tender existed in many countries in Europe. Do you think the existence of these ratios had an influence in preventing any great or rapid alteration in the relative market value of gold and silver?—I think in nearly all countries these legal ratios existed, and that would certainly be the natural effect one would expect from the existence of these ratios; but I have not investigated the subject, and I notice Dr. Soetbeer says that the legal ratio almost always followed the market ratio. I am not able to say myself whether that statement is well founded or not; but the existence of those ratios, I should think, would tend to steady the price in the 16th century.

5402. The monetary unit is generally defined to be a certain weight of gold or silver?—Yes, at present.

5403. But the essential thing in a monetary standard is stability of purchasing power, is it not?—I should think at the present time that is so.

5404. Would it not be so at all times?—At times when money was really a representative of barter, then perhaps the deferred payments were not of so much importance.

5405. Stability of purchasing power would not be of so much importance at those times; but it would be an advantage at all times?—I should imagine that it is a very great advantage at any time, but in modern times it is of the greatest importance.

5406. Of the greatest importance because there are so many deferred payments?—Yes, contracts into which time enters.

5407. Then the essential thing in a monetary standard in the present day being stability of purchasing power, would you say that the adoption of a definite weight of gold or silver as a monetary unit is based on the belief that the purchasing power of the metal chosen will remain fairly stable?—I should think that to a great extent gold and silver may be said to be survivals of the fittest, mainly on the ground that they have been shown to be most stable in the purchasing power.

5408. And the greater and more rapid the fluctuations in the purchasing power of the monetary standard the less perfect would that standard be?—Yes, certainly.

5408*a*. So long as a fixed ratio is maintained between gold and silver, the purchasing power of gold necessarily varies in the same direction and to the same degree as the purchasing power of silver?—It seems to me to follow logically as matter of course from the existence of the fixed ratio.

5409. Before 1873 England had a gold standard, Holland had a silver standard, and France had a bimetallic standard, and during that time the relative value of gold and silver was nearly constant. Would you then say that before 1873 England, Holland, in France, in so far as regards the essential quality of stability of purchasing power, had practically the same standard?—Yes, I should say so, and I was looking up some of the writings of Tooke on the subject, and I found in the volume of the history of prices, published in 1840, that in an argument advanced against bimetallism—it was proposed then also—he states that there was never any difficulty in disposing of any quantity of silver in this country, and practically there were no variations in price, so that practically it seems even in this country at that time silver was regarded as convertible into gold.

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5410. (*Chairman.*) At what date was that?—That was written in the volume published in 1840. The reference is Vol. III., p. 212–214.

5411. (*Mr. Barbour.*) But since gold and silver began to fluctuate materially in relative value, gold and silver countries have not merely had standards differing in name and in the material of the standard but also in the essential quality of stability of purchasing power?—Yes, it seems to me so.

5412. I suppose a country that for the time being has a good monetary standard possesses an advantage as compared with a country which has a less stable standard?—Yes, I should think that must be so.

5413. You said in your previous evidence that if the purchasing power of the standard increased while production was not cheapened in a corresponding degree, the producer suffered while the person who had a mortgage on his industry gained?—Yes.

5414. You also said that if the purchasing power of the standard increased, owing to a reduction in the cost of production of commodities, the mortgagee gained; but the producer was not in a worse condition than before, because though he had to part with more commodities in order to obtain the gold wherewith to pay the mortgagee, he was able to produce the increased amount of commodities by a not greater amount of labour?—Yes, I admitted that as a general proposition.

5415. Do not, however, the latter question and answer assume that the reduction in the cost of production is uniform in the case of all producers of the same commodity, and may it not be the case that the cost of production is reduced for some producers of a commodity, and not for others?—Yes, I think it is necessary to introduce some qualification of that kind.

5416. In the latter case does not the producer for whom the cost of production is not reduced suffer a positive loss while the mortgagee makes a positive gain at his expense?—Yes, it seems to me so.

5417. And if the cost of production of a large number of commodities is reduced, would it not be the case that the prices of another series of commodities might fall in sympathy with them, and the producer of the latter class of commodities would suffer a positive loss owing to the increased purchasing power of the standard?—Yes, I should think that would be a good example of the qualification just noticed.

5418. To take an example of a loss of that nature. The prices of Irish agricultural produce have fallen, owing no doubt, to a large extent, to its having become possible to lay down foreign produce more cheaply in this country; but the fact that agricultural produce, like many other things, has fallen in price, does not give the Irish farmer more produce to sell to meet his rent?—No.

5419. Would you then say that the ideal or perfect standard would appear to be one under which the general purchasing power remained unchanged?—I think if that were practically possible it would be.

5420. I suppose we can never hope to get such a standard in practice?—I do not think it is worth discussing the point at present. Under the present conditions I see no prospect of getting anything like an ideal standard used practically.

5421. But the less the deviation of the standard from stability of purchasing power the better for those who have to use it?—Yes, the nearer the approximation to that stability so much the better. I was referring to the possibility of a tabular standard. I do not know whether you have had that in your mind, because it seems to me that under present conditions, at any rate, it would not be a practical remedy that could be considered.

5422. The alteration in the relative value of gold and silver in the last 14 years is, in round figures, 25 per cent., and there must consequently have been an alteration of 25 per cent. in the relative gold and silver prices of articles bought and sold for gold and silver?—That seems to follow logically.

5423. That is to say, if a commodity is produced in a gold country and sold in a silver country, the alteration in the relative value of gold and silver must have been accompanied either by a rise of 25 per cent. in the silver price, or by a fall of 25 per cent. in the gold price, or by a rise in the one case and a fall in the other, amounting in the total to 25 per cent.?—It seems to me that there must have been a total change of that kind distributed in some manner.

5424. This change in the relative price may be exaggerated or partly concealed by an alteration in the cost of transport between the two countries, but the change in the relative gold and silver prices connected with an alteration in relative value of gold and silver is necessarily in the direction and to the extent just stated?—Yes, that seems to me always the difficulty that every particular price depends upon a number of causes, and it is quite possible, even if we take a number of relative prices, that the effect due to this currency change might be quite concealed, owing to the influence of other causes, but still it seems to me that this is a perfectly *vera causa*, and that it must operate in the way that you suggest.

5425. I believe you are of opinion that a variation in the relative value of the two standards such as has occurred in recent years would give, for a time at any rate, an advantage to the producer in silver countries, and would specially affect industries in gold and silver countries which produce the same article for sale in the same markets?—It seems to me it would be so unless silver prices rose.

5426. The variation would specially affect industries in the gold and silver countries which produced the same article for sale in the same markets?—Yes.

5427. Is it your opinion that this variation in the relation between the two standards in recent years has been sufficient to relatively stimulate production in the silver countries, and to cause a corresponding depression in gold countries?—As far as I can gather, the prices in silver-using countries have not moved upwards, and therefore it would follow that the gold prices must have moved downwards, of these articles, and so there would be a depression in the gold-using countries from that cause, through the fall in prices.

5428. I suppose this relative stimulus and depression would only be temporary, and must cease if silver ceases to fall relatively to gold?—Yes, so far as that cause is concerned.

5429. If silver continued to fall relatively to gold, the stimulus and depression would continue as long as silver continued to fall?—Of course, silver cannot go on being depreciated for ever, it must come to a stop some time, and then the stimulus and depression would cease.

5430. And if silver rose relatively to gold you would have the opposite effect, a temporary stimulus in gold countries and a temporary depression in silver countries?—Yes, that seems to me to follow.

5431. And what you think to be desirable, I understand, is that all countries should have standards which should not vary relatively to each other in purchasing power?—Yes.

5432. And you think this result would be obtained by preventing fluctuations in the relative value of gold and silver?—Yes, of course it is very difficult to describe in a brief manner the purchasing power of the standard in different countries. Perhaps I should limit myself to saying that I think it would be a good thing if the materials of which the standards of the different countries are composed should not fluctuate in relative value, and in that way you would take away one of the causes of disturbance in the purchasing power of the standards.

5433. That is, you would practically get the same standard?—Practically it would come to that.

5434. The same standard so far as stability of purchasing power is concerned?—So far, but still you will get of course local variations in purchasing power whatever standard were adopted. The same amount of gold and silver would never

command precisely the same amount in two countries one thousand miles apart.

5435. I believe you have made an investigation by a new method into the question of the purchasing power of gold at different times?—Yes, I believe the method is new.

5436. I will try to explain the principle which you have adopted, and I will ask you, if what I say is correct. In order to calculate exactly the variation of the purchasing power of gold in any country between any two dates, it would be necessary to make a complete inventory of the whole wealth of the country at the later of the two dates, and then to value that inventory according to the price prevailing for each article at that date. The next step would be to value the same inventory according to the prices prevailing for each article at the earlier date. The total value of the inventory at the prices of the later date, as compared with the total value at the prices of the earlier date, would give the exact ratio in which the purchasing power of gold had increased or decreased?—Yes, that is, theoretically, the leading idea. I was dissatisfied with the small number of articles taken on which the index members are founded, and I thought, at any rate theoretically, it was possible to give an interpretation to the ordinary definition of the value of gold as its command over things in general. My idea was to give a meaning to this phrase "things in general," and the most general and complete meaning that seemed to me possible was to take the valuation of all the wealth in the country at any particular time, if you could obtain it. Of course, the difficulty of applying that method is to calculate the general mass of wealth in any country at any time.

5437. But as a matter of theory you have seen no reason to doubt the correctness of your method?—No, I think, as a matter of theory, it would be generally admitted to be correct, in fact it is really only interpreting what has been stated in every book on political economy, namely, that the value of money is its command over things in general, not over a few particular things. Perhaps I might explain it better if I were to take it not in such a theoretical manner. I would put it in this way. Suppose you were to make a calculation of the accumulation of wealth in a country, and you found in the course of 10 years that there was a diminution we will say of 1,000,000,000*l.* in the aggregate wealth of the country, applying such a method of calculation as Mr. Giffen has adopted. That change in the value of the national wealth may be due either to a change in the quantity of the different articles, or it may be due to a change in the valuation of these articles; and it would make a great difference, for practical purposes, if it is merely a change in the value. Now if you could allow for the increase or diminution in quantity, as the case might be, then you could calculate precisely how much is due to the difference in your valuation.

5438. (*Chairman.*) I am not quite sure how you allow for the increase or diminution of quantity?—It would be very difficult to estimate accurately the increase and diminution in the quantity of national wealth, and that was the reason, theoretically, for taking the same mass of wealth, that is to the same inventory at any particular time applying two levels of prices, and seeing what is the difference. For instance, I suppose if Mr. Giffen were to make a calculation now of the wealth of the country, that he would not obtain such a high figure, proportionately, as ought to be expected, when we take into account the great growth in the volume of wealth. Well, if that were the result, it could only be that there has been an appreciation of the standard, that you are measuring your wealth in a more valuable standard.

5439. (*Sir T. Farrer.*) I thought that your plan was solely for the purpose of getting at actual prices, not for the purpose of ascertaining whether the cause was the scarcity of the standard on the one hand, or an increased abundance of the commodities on the other?—Yes, my purpose was simply to measure the change in the value, from whatever cause it may be due.

5440. So that it has nothing to do with the cause in the change of price?—No; and if the method is not clear I think I might make it clear by a simple example, not taking the wealth of a nation, but say the wealth of a farmer. If a farmer calculated that his farming stock at a certain time was worth 1,000*l.*, and that at another time it was worth 2,000*l.*, that might be due either to an increase in the quantity or it might be due merely to a change in prices; then, if he could estimate the increase in quantity, he could estimate how much was due to the change in the purchasing power. If you could apply that to a nation, and get in the roughest manner any idea of an increase in quantity, and yet, at the same time, you do not get a corresponding increase in the nominal value of the total, then you must have had a change in the purchasing power of the standard.

5441. But supposing that his farm, with the same amount of labour, produces twice as much at the later time as in the former time, the change of prices would be obvious; but would you say that that was due to a change in the standard?—This is only a question of measurement. So far as this particular farmer is concerned I think we cannot speak of the standard. The standard applies to the whole of things in general, to the mass of things.

5442. (*Mr. Barbour.*) I understand that you attempted to ascertain the change in the purchasing power of gold, without reference to what the cause of that change may have been?—Yes, without reference to what the cause may have been. It may not be due to scarcity of gold, it may be due to abundance of commodities, efficiency of labour, or anything; but it seems to me, the best scientific meaning of the purchasing power of gold, is to take the total mass of wealth in the country if you can obtain it, and see how much that would come to at one time, and how much it would come to at another. The difference would give you the change in the purchasing power of the standard.

5443. But I understand that you found it impossible either to make a complete inventory or to obtain a complete and accurate statement of prices at either date?—Yes.

5444. And that you have attempted, while conforming, as far as possible to the general principle, to obtain an approximate solution?—Yes, I took the best figures I could; of course we cannot possibly get a complete national inventory. I may mention that I believe, in America, when the census is taken, an attempt is also made to get a complete valuation of the national wealth. Well, if something of that kind were done in this country, if at the time of the census being taken or at any other time, things were compared on the same method, then if you could allow for the quantities——

5445. I will not go into the question of the method you adopted for this purpose, but would like to know what confidence you have in the statistics you employed, and what degree of confidence this Commission may, in your opinion, place in the results you have obtained?—As to the statistics I have employed, they are partly the statistics which are quoted in Porter's Progress of the Nation, which is a standard book, and partly statistics collected by Mr. Giffen. I carefully took the statistics of the national wealth which had been compiled by other people, so that there might be no unconscious bias in bringing out any answer, and if those statistics can be relied upon for the purpose for which they are relied upon by Mr. Giffen and Mr. Porter in their investigations, I do not see why they should not be applied also in this case. Of course they are very rough.

5446. What confidence do you place in the results?—I should allow that in these statistics, as is pointed out by those who have compiled them,

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that in these statistics by which you calculate the sum total of national wealth, it is extremely difficult to arrive at anything like an exact conclusion; but if you apply the same method at different times, or get any scientific observer to apply the same method at different times, it seems to me that you can rely upon the general result. As to the question of degree, I would place quite as much confidence in this method and the results obtained by this method as in the method of any kind of index number that I have seen. I have no hesitation in saying that the result obtained from this method is as accurate and as much to be relied upon as the result obtained from the index numbers.

5447. Do you think it is a better system than the system of index numbers?—I think theoretically it is a better system, and I think practically it is as good in its results.

5448. (*Sir T. Farrer.*) Do you include in your inventory of the national wealth, labour, which is one of the things exchanged against gold or rather measured by gold?—As I explained, the comparisons that I have made were comparisons of the national wealth calculated in Porter's Progress of the Nation, and also by Mr. Giffen, and in neither of those calculations is labour reckoned, but theoretically, I should include, at any rate, some forms of labour.

5449. (*Mr. Barbour.*) I understand your investigations to show that in the earlier half of the present century there was a very great increase in the purchasing power of gold?—Yes, certainly.

5450. It has generally been held that between 1848 and 1868 there was some decrease in the purchasing power of gold, but I believe the result of your investigation leads you to doubt whether this was the case?—Yes, and I should say that there is a tendency to exaggerate very much the effects of the great gold discoveries in the matter of depreciation. I think, according to Jevons' own calculation, the depreciation was only about 16 per cent., and it seems to me, if you look at increase in the quantity of wealth, that probably there was some slight appreciation of the standard in that period.

5451. And I believe you consider that between 1875 and 1885 there has been a distinct rise in the purchasing power of gold, though probably, so far, it is less than that shown by the fall in the wholesale prices of the chief commodities?—Yes, I think, applying this method, taking the best statistics that I can, that at present the fall in general prices, that is, taking all forms of property, has not been so great as is indicated by the usually accepted index numbers.

5452. The results which you have obtained agree, to a certain extent, with those obtained by the system of index numbers?—The results are in the same direction, only there is a difference in degree. For instance, taking the last example of the great gold discoveries, the results obtained by the index numbers is depreciation, while I should rather put it a check to the appreciation, but still the movement is in the same direction.

5453. The objection to the system of index numbers is that, even if allowance be made for the relative importance of different articles, the articles for which prices are taken represent only one section of the wealth of the country, and the results given by them are liable to be affected by causes which do not influence, or do not influence in an equal degree, the whole of the wealth of the country?—Yes, I think, especially in *The Economist* index numbers, that far too great stress is laid upon raw materials which are subject to special causes.

5454. But judging from the results you have obtained by a different system, it would appear that the system of index numbers does indicate the general direction of the movement of the purchasing power of the standard, though it may fail as an exact measure of the increase or decrease?—Yes, I think the index numbers ought to be considered, and the result is that they do show a change in the purchasing power; and, as I say, over the periods that I have taken, the difference is only one of degree, the direction of movement is the same.

5455. The total production of gold in the 14 years following 1871 is estimated to have been 316,000,000*l.* sterling?—Yes.

5456. And there were special demands for gold during this time on account of Germany, the United States, and other countries, which would not fall much short of 200,000,000*l.*—Yes; those are the figures I have seen stated.

5457. And authorities have estimated that the demand during that time for hoarding and ornament in the East, and for industrial purposes in the civilized countries, would be about 180,000,000*l.*?—Yes; I have used those calculations.

5458. And that would give a demand of 380,000,000*l.* as against a total production of 316,000,000*l.* sterling?—Yes.

5459. It is possible that a portion of the demand may have been in some cases counted twice over; first in the 200,000,000*l.*, and secondly in the 180,000,000*l.*?—I am not able to say as to the calculations; I have only taken the calculations as they are usually put.

5460. It seems to me that a portion of the demand may have been counted twice over; but, seeing that these demands are, at any rate, about equal to the total production, I suppose one would naturally expect to get some increase in the purchasing power of gold since 1871; especially when we take into account the constant increase in trade in the volume of commerce, the increase in the use of metals. I believe statisticians who have occupied themselves with such inquiries put the total income of the inhabitants of the British Isles at probably 1,200,000,000*l.* sterling a year?—I believe that is Mr. Giffen's last calculation.

5461. And the total yearly production of gold at the present time is believed to be about 20,000,000*l.* sterling, or considerably less than 2 per cent. of the total yearly income of the inhabitants of these islands?—Yes.

5462. And if we were to take into account the income of the people of France, Germany, and other European countries; of India, Australia, Russia, Japan, China, the states in Central and South America, as well as of Canada and the United States, it would be evident that the value of the total yearly production of gold must represent but a very small per-centage of the total income of the world?—Yes, certainly.

5463. (*Chairman.*) The difference between the per-centage which you would have if the production of gold had gone on at its old rate, and the per-centage which you have now that gold is being produced to the extent that it is at present, would be very slight in relation to the total income?—Oh, yes; hardly appreciable.

5464. (*Mr. Barbour.*) Looking to the fact that the yearly production of gold is relatively so small it would appear that if the people of the countries named should devote even a minute fraction of their yearly income to the purchase of gold for ornament and for hoarding, the demand for this purpose alone might very easily equal the total annual production of gold?—Yes.

5465. I believe you hold that the value or purchasing power of gold, like the value or purchasing power of other things, is determined by the supply of gold and by the demands of all kinds for gold?—I think we ought to summarise the influences of gold on general prices by speaking of the supplies of gold and the demands of all kinds for gold, but at the same time it seems to me that the way in which demand and supply determine the value of gold is not so simple as with other values. If we mean by the value of gold the general level of prices, of course a great many factors operate upon the general level of prices, as for instance the great increase in the amount of commodities.

5466. That is an increase in demand?—Yes. When you abstract all the demands for other purposes than currency, then the general level of prices would

depend upon what is left over, that is on the quantity of money. This is really bringing in demand and supply, but it does not bring them in in the simple way as when applied to a single commodity of an ordinary kind.

5467. (*Chairman.*) By what is left over do you mean for coinage purposes?—Yes; what is left in existence, not speaking of the annual supply.

5568. But do you not include in what is left in existence that which is used in the arts, and what is hoarded?—No, what is really hoarded would be practically like an ornament. My general proposition is that the level of prices all the world over would be so adjusted that the total quantity of money finds employment and that corresponds to the general law of supply and demand as affecting any particular article. You say that the price of any article would be so adjusted that the quantity demanded would be equal to the quantity supplied, and so I should say as regards the money of the world, that the level of prices would be so adjusted at any time that the quantity of money would be just used.

5469. (*Mr. Houldsworth.*) Do you mean to say that, supposing you eliminated the question of any fresh supply, and also eliminated the question of any demand for other purposes than currency, the level of prices would remain the same as far as gold was concerned?—Yes, but there would come in the element of demand for gold for purposes of currency, and you might get a great change in the demand.

5470. If the bulk of the gold remained the same, any demand would only be a transfer from one place to another, would it not?—There might be an increase in the total demand for currency. Suppose for instance, that one of our colonies in the course of a few years got double the number of people, and double the wealth, and so on; then it might require double the amount of gold to circulate its commodities.

5471. Might that not be met by the use of various banking expedients?—Yes, of course that would operate also, but still, taking the world as a whole, I should say that the level of prices would be adjusted so that the total quantity of money would be used, and in that way the level depends upon the quantity of money.

5472. (*Chairman.*) It is conceivable, is it not, that the whole of the transactions in any particular nation, and the whole of the international transactions of the world might be settled without the transfer of any coin at all by a system of set-off?—I suppose it is conceivable by an effort of imagination, but I do not think it is conceivable as practicable, especially if you consider the case of a foreign drain.

5473. (*Mr. Barbour.*) The demands for gold would be of the following nature. There is a demand for gold for use in the arts, for hoarding, for ornament, as a medium of exchange to be actually passed from hand to hand, as a reserve to support credit and business transactions, and so forth?—Yes, those are the principal elements of the demand.

5474. And would you say that when gold once had been used in the arts, hoarded or made into ornaments, it would, for a time at any rate, pass out of the market and cease to be a portion of the effective supply, and would practically have no influence on prices?—Yes, it would have practically no influence on the general level of prices, that is what I meant to say when I said it was the quantity which was left over which determined the level of prices.

5475. Are you aware whether the amount of gold passing from hand to hand in the exchange of commodities has ever been very great?—I have no special information.

5476. It is in respect of this use of gold that the employment of cheques and the resort to clearing houses would effect an economy of gold?—Yes, clearly.

5477. Cheques and clearing houses would effect no economy as regards use in the arts, hoarding, or use for ornament?—Obviously not, except as regards hoarding.

5478. Could you say whether or not the more extended use of cheques and clearing houses would tend to reduce the reserves?—I should think an extension of banking involves a certain addition to the reserve somewhere.

5479. But you could not give a decided opinion upon that question?—It would depend upon other conditions, the conditions under which the system is established. You could conceive of an increase in the use of cheques and clearing houses, leading to less reserve being required, taking the nation as a whole.

5480. Is it not the case that standard money is not merely a measure of value, but also an equivalent against which commodities, may be, and frequently are, exchanged?—I think that every exchange implies in modern times a reference to some form of money, some standard of money.

5481. You could measure a thousand yards of silk with a yard measure, but you could not buy a thousand yards of silk with a yard measure?—No.

5482. A merchant may sell commodities and be paid by cheque, and he may buy commodities and pay by cheque, and his transactions may be on a very large scale, and yet very little gold may pass through his lands?—Certainly.

5483. But though this is the case, the merchant has got the right to claim actual gold if he likes, when he sells commodities, and he is liable to have to provide gold when he buys, and consequently the reserves which support credit and commerce, must always be of a certain magnitude; you cannot do without reserves?—No, it seems to me that it is impossible practically to think of doing without reserves.

5484. And I suppose those reserves would have to be proportioned to the extent of the business, and to the risk of sudden claims being made for gold, other things being equal?—Yes, other things being the same, especially considering the kinds of claims that may be made, whether the claims are known and the possibility of the claims being suddenly made, and so on.

5485. The possibility of a panic, for instance?—Yes.

5486. So that by no elaboration of the system of cheques, clearing houses, and other similar devices, could you get rid of the necessity of keeping reserves of coin or bullion?—No, it seems to me that it would be impossible to get rid of that. The very essence of convertibility of bank notes, taking the simplest form of credit depends on a certain amount of reserve being held, and then there is also the danger of a foreign drain. Whatever great economies may be made in one country there is always the chance of a foreign drain.

5487. You are no doubt aware that it has been said that as people become wealthy they prefer gold to silver for various purposes; and if you divided the people of any country into two classes, those using silver for ornament or personal wear, and those using gold for the same purposes, it would be found, speaking generally, that the class using gold was, on the whole, the wealthier class?—Certainly.

5488. Are you aware that the import of gold into India for hoarding and ornaments has amounted in recent years to more than 3,000,000*l.* sterling yearly?—I have seen the statement.

5489. And are you aware that the yearly consumption of gold in the arts and manufactures in civilised countries in the present day is estimated as high as 12,500,000*l.* sterling by Dr. Soetbeer?—Yes those are the figures I adopted from him in a paper of my own.

5490. Of course, it is very difficult to make an estimate on this subject, and Dr. Soetbeer's estimate may be too high, but I will quote Dr. Soetbeer's own words to show what he thinks of this estimate. "I have already ventured upon the attempt to make

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"an approximate estimate of the application of the "precious metals to industrial purposes in the "civilised countries, taking an average for the last "few years, of course allowing a large margin for "error. I have again brought them forward, because "there are applications of the metals which were "then, either partly or wholly unknown to me, and "which might lead to an alteration of the esti-"mate. However considerable the colossal sum of "gold annually applied to ornamental and other in-"dustrial purposes may at first sight appear, all "doubt of the probable truth of the estimate will "disappear when we consider how enormously the "demand for gold articles and for manufactured gold "goods has arisen, owing to the increase of popula-"tion and prosperity." Dr. Soetbeer's great reputation would in any case justify consideration of any figures he may put forward, but I should like to know whether it is your opinion that the consumption of gold in this way must be very great?—I think there are very good reasons apart from this calculation. I was referring recently to Mr. Jacob's book on the precious metals, Vol. II., chapter XXIV., and I find that he has made several calculations showing that an enormous quantity of gold was used for the arts during the eighteenth century. He quotes a number of statistics obtained from manufacturers in Birmingham, Paris, and other places. I should think that the demand for other purposes than currency must have increased very greatly since that time, owing to the great increase in the consumption of gold in the arts and manufactures, and even at that time he found it necessary to take account of that element in estimating the amount left over for coinage.

5491. (*Chairman.*) With diminished prices, which would be likely to bring about diminished wealth, would you not expect that demand to diminish?—If prices were to fall to an extremely low level, supposing they became a fraction of what they are at present, then no doubt people would think a good deal before they bought a gold watch.

5492. But if there were a diminution of the incomes of the individuals forming a nation, would not these articles of luxury be amongst the first to be dispensed with, and consequently a diminished demand for them soon come about?—Yes, I think so; but at present, in spite of the fall of prices owing to the increase in the quantity of wealth, there is not any absolute diminution in the nominal income of the world, and so there is the same amount available. I should, however, quite accept as a general principle what you say, that the general fall of prices would so far tend to diminish the demand for gold for the purposes of the arts.

5493. (*Mr. Barbour.*) I have got here a statement showing the yearly value of diamonds and other precious stones imported into the United States for the years from 1867 to 1884. I may mention that the recorded exports are very trifling, and it is stated that there is a considerable amount of smuggling, and the value of the articles smuggled is, of course, not included in the figures. This statement shows that the average annual value for 1867, 1868, and 1869 was $1,459,666, while for 1882-3-4 the average annual value was no less than $8,792,704. Do not these figures indicate, firstly, that a very large expenditure is being yearly incurred on articles of value for use as ornament; and secondly, that the amount so spent tends to increase rapidly as a country increases in prosperity?—Yes, I should think that is good analogical evidence that there would be an increased demand for gold for similar purposes.

5494. From the analogy of these figures you would infer that there may have been a large increase in the demand for gold for the purposes of ornament and art?—Yes.

5495. I believe the average yearly production of gold in the first 40 years of the present century is estimated to have been rather less than 2,500,000*l.* sterling?—I think that is the calculation.

5496. And it would follow from the figures that have been quoted that India is now taking more gold for hoarding and ornament every year than the total yearly production of gold 50 years ago?—Yes.

5497. And it would follow that for use in arts and manufactures the civilised world is now taking perhaps four or five times the total production of 50 years ago?—Yes.

5498. The total production of gold is now, of course, very much greater than it was 50 years ago; but you are no doubt aware that it is not so high as it was in the years immediately following the great gold discoveries, and that in recent years it has perhaps shown a tendency to diminish?—Yes, the figures that I am familiar with show a diminution in the production compared with the years immediately following the gold discoveries.

5499. Well, looking to the figures which I have quoted of the total yearly production of gold 50 years ago, and of the estimated consumption of gold in the present day, it would appear that there is no reason to doubt that during the last 50 years there must have been a very great increase in the consumption of gold for hoarding, for ornament, and for use in the arts?—Yes.

5500. With the limited production of 50 years ago, it would have been simply impossible to have met such a large consumption as we have in the present day?—Yes, it seems so.

5501. And looking to the fact that the value of the total yearly production of gold is now but a trifling percentage of the income of the world, to the rate at which population is increasing, to the still more rapid rate at which wealth is increasing, to the tendency to an increased use of gold which appears to accompany wealth, and to the fact that the production of gold does not continue to increase, is there not reason to fear that the consumption of gold for purposes other than currency, may at no very distant date overtake the production of gold?—That seems to me very probable.

5502. It would therefore appear that what we have to look forward, unless something unforeseen occurs, is a continuous and, perhaps, rather rapid increase in the purchasing power of gold?—That is to say, there would be less and less available for purposes of currency; and assuming, as I stated before, that the quantity of currency is, at any rate, one important factor in determining the level of prices, then we must get a fall in the level of prices, or an increase in the purchasing power of gold.

5503. Dr. Soetbeer, making what he admits is a very conjectural estimate, puts the supply of gold for money and gold reserve in civilised countries at the following figures: For the 10 years from 1851 to 1860, 1,621,000 kilograms; for the 10 years 1861 to 1870, 1,023,000 kilograms; for the 10 years 1871 to 1880, 774,000 kilograms; and for the five years 1881 to 1885, 172,000 kilograms?—Yes.

5504. Under these circumstances does it not appear doubtful whether gold is well suited to be a monetary standard if used alone, and unlinked to silver?—I think there is a great danger of the rapid appreciation of gold if it is used in that way.

5505. And I believe it is only since 1873 that we have had any experience of the use of gold as a monetary standard, unlinked to silver?—Yes; practically.

5506. And do you consider that the results of that experiment have, so far, been satisfactory?—No; I should say most decidedly not.

5507. And do you think that gold is likely to prove a better standard in future than it has done during the last 14 years?—Taking the demands that have been pointed out for gold for purposes other than currency, and the growth of trade and population, it seems inevitable that there should be a constant and rapid fall in prices if gold alone is used for money.

5508. And if people prefer gold for ornament as they get wealthier, the demand for gold would increase more rapidly than the growth of demand for silver?—I am not able, of course, to say as to the comparative

demand, because the improvement in the condition of the working classes and the more equal distribution of wealth might lead to a great demand for silver, silver watches, and the like.

5509. It has been pointed out that the total production of gold between 1493 and 1850 was about 660,000,000*l.*, and that since 1850 the total production has been about 890,000,000*l.*, while special demands within the last 15 years possibly came to 250,000,000*l.* From these facts it is argued that there cannot be a greater scarcity of gold now than there was before 1880. Have you any remarks to make on this point?—The scarcity must be entirely a relative term which depends upon the work which the gold has to do, and one of the most remarkable consequences of the great gold discoveries, it seems to me, was the expansion which took place in trade and commerce, and the consequent increase in the demand for gold. Scarcity must be always relative. As I explained, in answer to another question, there is always sufficient gold to circulate commodities, but there may not be sufficient to keep the level of prices stable.

5510. And it is your opinion that there has not in practice been sufficient in recent years to keep up the level of prices?—Yes.

5511. I wish to call your attention to some facts connected with silver. The estimated production of silver from 1493 to 1850 is 1,470,000,000*l.* sterling, and from 1851 to 1885, 480,000,000*l.* sterling. These figures, compared with the corresponding figures of the production of gold, even after allowing for the extra demand for gold in the last 15 years, would appear to indicate that looking merely to the relative supply of the two metals, silver should have risen since 1850 as compared with gold?—Yes, if you look to supply only, and it was generally anticipated, at the time of the great gold discoveries, that there would be a rise in silver.

5512. And does not the fact that silver has fallen instead of risen point to the conclusion that we must look to the demand rather than to the supply to ascertain the causes of the fluctuation in the relative value of the precious metals?—Yes, I think so.

5513. You have been asked some questions about the economy in the use of the precious metals, by the use of cheques, clearing houses, &c. These economies, assuming them to be of importance, would have much more effect in the civilised countries than in the backward countries?—Yes.

5514. And therefore they would have affected the demand for gold rather than the demand for silver?—Yes.

5515. As the civilised countries now generally use gold, does not this make it still more remarkable that silver should have fallen rather than risen?—Yes; it seems to me so.

5516. And does not the conclusion appear irresistable that the demand for gold from some cause or other has increased much more rapidly than the demand for silver?—Yes; it seems to follow.

5517. I understand you to advocate the use of both gold and silver as legal tender at a fixed ratio, in the first place because in this way we should get a standard under which the effects of fluctuations, either of supply or demand in one or other of the metals, would be moderated?—Yes.

5518. And in the second place because there appears to be a special tendency towards an increase of purchasing power in the case of the gold standard, which it is desirable to limit by the use of silver at a fixed ratio to gold?—Yes, I think that the more stable you can get the standard the better; and that this tendency towards appreciation on the part of gold would be met to some extent by linking it to silver.

5519. And in the third place because all countries would have, in the essential matter of stability of purchasing power, the same standard, and no country would be protected through the currency at the expense of another country?—So far as currency is concerned they would have the same standard. There would be local variations in the purchasing power.

5520. So far as the general purchasing power of the standard was concerned, they would have the same standard?—So far as general purchasing power is dependent upon the currency, it would be the same.

5521. And in the fourth place because all countries would have international money, the existence of which would facilitate international trade, and in all pecuniary transactions between different countries?—I think one ought to distinguish between international money and what is proposed by a convention of this kind.

5522. The money of one country might not circulate or be a legal tender in another country; but the money of one country could be converted into the money of another country at a constant and well-know ratio?—As regards what is the most important function of money, the stability of purchasing power and the absence of any variations owing to the use of different standards, so far, they would have practically the same money, but the phrase international money might suggest other difficulties.

5523. Do you think that if the old ratio of one to $15\frac{1}{2}$ were adopted, and silver rose to $60\frac{7}{8}$ pence per ounce, there would be any danger of the world being injured by an enormous influx of silver?—So far as I have seen the evidence, I do not think that there would be any danger of a great influx of silver. I may mention that I consulted on this point Professor Geikie, professor of geology in Edinburgh, and he said he did not see any reason to suppose that there would be a great increase in the supplies of silver, from geological reasons, and the idea of the geologists is rather that silver is embedded in hard deep veins, and that it is difficult to get. And then it seems to me also that in spite of a number of calculations which have been made lately to show that silver can be produced for a very small sum, we do not get any great increase in the production. Surely the present price of silver, if it can be produced at 1*s.* 6*d.* an ounce, ought to make the silver mines produce as much as they could sell. The present supply of silver does not seem to me to be at all excessive, and would not lead to anything which could be called an enormous influx of silver.

5524. Have you at all considered the question of the supply of gold from a geological point of view?—Perhaps I may be allowed to read a paper given to me by Professor Geikie—

"The annual output of gold is not likely in my opinion to vary much under the present conditions of exploitation. The richa uriferous gravels, &c. from which gold used to be obtained in such large quantities are practically exhausted over many regions, the chief supplies of that metal coming now from deep mines. Gold has, in fact, to be mined for, as a general rule, in the same way as many other ores; and the experience of recent years has shown that when we take the average yield of all the gold mines of some extensive region, such as the United States of America, the annual output is found to vary but little. Of course so long as any part of the earth's surface remains unexplored, there is always the chance of readily worked auriferous soils &c. being discovered. But from all that is known of the geology of the continents, it seems hardly likely that the early experience of California and Australia will be repeated on a similar scale elsewhere.

"I should expect the output of silver to vary slightly from year to year, just as is the case with other ores; but I see no reason for believing that the production of silver will become relatively greater than it is at present. The average annual yield of gold may increase as fresh mining districts are opened up, and the same may be the case with silver. But over a number of years the relative proportion of the two metals will probably not vary much. At present it would seem as if the yield of gold was decreasing,

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while that of silver was increasing. But similar fluctuations have occurred in the past, and may be expected to repeat themselves in the future."

5525. Do you think that even with bimetallism at the old ratio the world would be much more likely to suffer from the short supply than from the over-supply of the precious metals?—I should think that still the tendency would be, if we restored what was the practical condition of things before 1873, towards appreciation of the double standard that is towards a general fall in prices.

5526. And you think the facts of the period immediately succeeding the great gold discoveries distinctly support that conclusion?—Yes, certainly.

5527. Now I am coming to another point. So far as regards the standards of weight and measure, every country is independent of every other country. Each country fixes its own standard of weight and measure, and no other country can interfere in any way with those standards?—Yes, that is unfortunately the case.

5528. But is that the case as regards the monetary standard?—It seems to me there is no real monetary independence, though there is nominal independence so far as the actual form of the coins and so on is concerned.

5529. But, so far as regards the purchasing power, from time to time, there is no real independence of other countries?—No; because to say that we are really independent would be to say that the prices in this country are not influenced by foreign prices.

5530. And the monetary standard of every country is liable to be affected so far as regards its purchasing power by the monetary legislation of every other country?—Yes, it seems to me that is perfectly plain.

5531. And as a matter of fact the gold standard of England has in this way been affected by the action of France, Germany, and other countries in recent years, and so has the silver standard of India?—Certainly.

5532. Does not this fact point to the conclusion that the question of the monetary standard is pre-eminently one for international agreement, and that no satisfactory solution of a permanent nature is possible without such agreement?—It seems to me to be quite clear, that so far as the essential elements of money are concerned, no nation can be independent of other nations.

5533. You advocate bimetallism because it would preserve a constant ratio between gold and silver. But I presume you would support any measure tending to prevent variations, especially rapid fluctuations in the relative value of the standards of different countries?—Yes; I simply advocate bimetallism as the best practicable remedy that is suggested.

5534. And measures of the nature I have indicated would be beneficial so far as they went, would they not?—Yes.

5535. You consider that no permanent and satisfactory solution of the present difficulties is possible without bimetallism in some form?—I do not myself think that any other remedy is practicable.

5536. (*Mr. Birch.*) In your answer to a question by the Chairman, you referred specially to the 16th century as a period when there were very slight variations between the ratio of gold and silver?—Yes.

5537. In the 17th century, I suppose you will allow, the variations were very considerable?—There was a considerable fall in the value of silver as compared with gold in the 17th century.

5538. Can you tell us to what extent?—I do not know without reference, but I referred on that point to Dr. Soetbeer's materials.

5539. Have you been able to refer to Stebbing's "Gold Coins" as an authority?—No, I have not referred to that.

5540. You do not know that he gives the variation from year to year, and he makes the variations to have been from 10 to 1 to 15 to 1?—I was under the impression that the ratio at the end of the 16th century was about 12 to 1, but that there was a great change in the ratio in the 17th century.

5541. You stated in reply to Mr. Barbour just now that a country possessing a good stable standard holds a higher position than other countries with a more variable standard?—Yes, so far.

5542. Well, do you not think that the single gold standard in England has been a good stable standard, and very beneficial to us generally?—I cannot see what special benefit we have derived from the single gold standard.

5543. But I think you said, in reply to Mr. Barbour, that with a good stable standard a country holds a higher position than other countries?—Yes; but I do not see that if we had gone on with bimetallism as in France, that there would have been any real difference. I do not think that this country has gained by the mere adoption of the sovereign.

5544. Have you any particular information which enables you to state that there will be less gold available for currency in coming years?—I have only the ordinary quoted statistics.

5545. Have you read Mr. Michel Chevalier's work in which he stated that gold would be shortly so depreciated that the sovereign would only be worth about 10*s.*?—Yes; I think I remember reading that sometime ago.

5546. Prophets occasionally make serious mistakes in their prophecies as to currency?—As to the prophecies of abundance, they generally seemed to.

5547. Mr. Barbour appeared to mix up the falling off in the production of gold with the demand for Germany. He told us that 200,000,000*l.* were required for Germany and France for coinage purposes, and then that there had been a falling off in the production of gold, and he put them together and seemed to infer that the whole constituted a loss or a reduction of the currency in some way?—The falling off in the supply and the increase in demand.

5548. You do not consider that the 200,000,000*l.* has been hoarded?—Oh, no; not at all; but then to a large extent it would replace silver, and would be abstracted from the currency in some other place to some extent at any rate.

5549. But you say that a great quantity of silver has gone to replace that very gold?—No, I do not say that.

5550. Well, a great quantity of gold has gone from some of the bimetallic countries, and silver has replaced it, especially in Spain, I believe?—I was not aware of that.

5551. You are not aware then of the amount of silver that has been coined during the last few years in Spain?—No, I am not aware of that.

5552. Nor the amount of gold that was held there some 15 years ago?—No, I am not aware of that.

5553–4. (*Mr. Chamberlain.*) In what way do you consider that the people of this country have suffered by the appreciation of gold?—Well, in the first place the capitalists have suffered a loss of profit. I should think in nearly all industries there has been a great loss of profit.

5555. How does that arise?—From the want of an adjustment of the cost of production to the fall in price obtained for their product.

5556. What portion of the cost of production has not followed the fall in the article produced?—Well, I believe in manufacturing districts the wages have not followed.

5557. Therefore the artizan population will have gained, even if the capitalists have lost?—They may have gained so far as that particular cause is concerned, but I should not think that they have gained on the whole; on the contrary.

5558. Well then, if they have gained because their wages have remained nearly the same, while the cost of everything which they purchase has been reduced, in what way have they lost?—In the first place, there is always a tendency on the part of the

capitalist who has lost profit to economise the employment as much as possible.

5559. But has there been any reduction of employment in this country? Is it not the fact that the production of the country is larger now than it was at any previous period?—I am not able to give statistics as to the amount of employment of labour, but at any rate it would seem to me to follow clearly that there would be always an effort on the part of the capitalist to employ less labour and to reduce wages as much as possible.

5560. But if you found, as matter of fact, that the production of the country continually increased, then you would not urge that the artizan class had lost anything to set against the gain to which you had previously referred?—If I found it proved that the artizan class was as regularly employed and at the same nominal wages, and that there had been a fall in the price of their articles of consumption, of course I should allow that the artizan class had benefitted.

5561. (*Chairman.*) It has at least been suggested that the increased production has arisen from improved machinery, with smaller amount of labour; do you know at all how that is?—I cannot speak as to the question of fact.

5562. (*Mr. Chamberlain.*) If there were a smaller employment of labour at the present time than at any previous time, would not that be likely to manifest itself in the returns of pauperism?—Yes, but it seems to me a relative question; and though we may have had no great want of employment, it does not follow if, under a better condition of things, capitalists obtained some profit that labour would not have been better employed and at higher rates.

5563. Permit me, that is a new contention; I asked you what the artizans have lost, and you suggest that they have lost because they have lost employment. I then put it to you that all the figures show that we have more employment now; I understand you to say, *non constat*, that they might have had still more employment if the circumstances had been different?—I am not able to speak of the statistics of employment in the manufacturing districts.

5564. Do you confine your contention to this, that the artizan class have lost, but that probably under altered circumstances they might have gained more?—I am not able to give any answer as to the question of fact owing to the extreme difficulty of getting any reliable labour statistics; but, taking the causes one by one, it seems to me that if the capitalist has lost profit,—and that is generally admitted,—that he at any rate will attempt to reduce wages or to make employment less regular, and that so far the labouring classes will suffer.

5565. It does not follow, does it, that he would attempt to reduce employment. He might attempt to get wages at a lower rate if that were possible, but he would not gain anything by reducing the number of hours, for instance, that his mills worked?—I do not know how much loss a capitalist would submit to before he decided not to employ labour.

5566. You know the common commercial maxim that it is the quantity that pays, and manufacturers endeavour to keep their works fully employed in order that the interest of capital may form as small a proportion of the cost as possible?—Yes, I am quite aware of that.

5567. But after all it is as you say a question of fact, and will you not admit that if it were the fact that there was any large increase in the number of persons out of employment, that must show in the pauperism returns?—Yes, so far, unless that is neutralised by other causes; for instance, there have been great accumulations on the part of the working classes. It is quite possible that they may have been living on their own savings to a large extent.

5568. But this appreciation of gold has been going on for a considerable number of years, 12 years at least; surely in the course of 12 years, if you assume that during that period there has been a great want of employment it must have told before now on the hoarded earnings of the working classes and upon the returns of pauperism?—But I do not think I said, I did not mean to say, that there had been actually a want of employment. I said there was always that tendency on the part of the capitalist to reduce employment, and that aggregate wages were not so good as they otherwise would be.

5569. Well, I put it to you if there has as matter of fact been any considerable diminution of employment; and if there has been no considerable fall in wages while at the same time the prices of all commodities have been reduced, surely the condition of the artizan has been improved?—Yes, that is quite possible.

5570. Well then, in that case, besides the capitalist, whom do you suppose to have been injured in any way by the appreciation of gold?—But is there any objection to my putting in the qualification that I think the condition of the working classes would have been much better if it had not been for this depression. If we take the condition of the labouring classes 12 years ago, and compare it with what it is now, we ought to expect in the natural course of things great progress, and not only mere stability. The period has been one of very great prosperity. There has been no great war, nor any great political disturbance. There have been enormous improvements of all kinds, and a great increase in the efficiency of labour and capital, and we ought to expect a constant increase in the prosperity of the working classes.

5571. Can you say that there has not been such constant increase in the prosperity of the working classes?—All I meant to say is that the improvement in their condition, and I am alluding only to the manufacturing districts, is not so great as it would have been if the capitalist had at the same time been earning profits.

5572. How do you prove that statement?—Well, I argue from general principles.

5573. During the whole of that time, the deposits in the savings banks have very largely increased: that is generally assumed to be an indication of the prosperity of the working classes, is it not?—The point I wished to insist upon is this general principle, that if the capitalists are also gaining profits, then the working classes will be gaining better wages than if the capitalists are not gaining profits, and whatever view you take of the determination of wages, it seems to me that must follow.

5574. I am endeavouring to test your theory by facts. I have asked you about the savings banks which are generally considered to be a test of the savings of the working classes. Then take the consumption of articles of food, such as tea, coffee, and tobacco: has not the consumption per head steadily increased during the whole of those 12 years?—Yes; I believe there has been progress on the part of the working classes.

5575. Then it is only a theory of yours that that progress would have been still more marked if gold had not appreciated?—Yes. It is only a theory, but I think it is a theory that would not be seriously disputed. I was only alluding to the wages in the manufacturing districts.

5576. You have not yourself made any statistical investigation into the question of wages?—No statistical investigation, but I have always inquired when I have been in any large town as to the condition of the labouring classes, and I think that what I have said is quite true. The working classes do feel, to some extent, the depression of trade.

5577. You must admit, I think, that it is rather a curious thing, if they feel it, that it is not shown in any of the statistics which usually are held to test the condition of the working classes?—If that is so, I should take the single cause as it is. You may show an improvement on the part of the working classes, but I should say that it ought to have been more, but for the absence of this cause.

5578. But then I understand your position to be

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this, that in spite of the facts that the savings of the working classes have increased continuously during the past 12 years, and that their power of purchasing, as shown by the consumption per head of the articles chiefly consumed by them, has also increased during that period, you would think it desirable to make a great alteration in our currency system, with the hope of still further increasing their prosperity?—Yes, that would be one element; and I should certainly think that the result would be an improvement in the condition of the working classes.

5579. And how do you think that their condition would be immediately benefited by it?—Well, in the first place, I should think that better trade with the silver-using countries of itself would tend to improve their condition.

5580. That is to say, that the silver-using countries would suffer, and that we should gain in proportion?—No; I rather meant that you would take away simply a disturbing element which depends purely upon money.

5581. But at present, I think your view is that silver-using countries have an advantage?—Yes, but it is a temporary stimulus due to monetary causes simply.

5582. You would take away that advantage from them?—So far, yes.

5583. And therefore your view is that the operatives of Manchester for instance would benefit, and in proportion the operatives in Bengal or Bombay would lose?—Well, I cannot say how far the operatives in India would lose if this stimulus were removed.

5584. But if they did not lose then the operatives of Manchester would not gain?—You must take into account prospective loss and prospective gain, that is all.

5585. But whatever is to be done it is in the nature of a transfer from one country, or from one class to another?—It is in the nature of a transfer of a certain stimulus; that is so, but at present a certain number of factories have been actually established in India, and it does not follow that if this system were adopted these factories would not go on simply through their own natural advantages.

5586. But if they did continue to exist through their own natural advantages, the operatives of Manchester would not be benefitted?—But you may go on rapidly increasing these factories in India, giving an undue stimulus to production by that action, and afterwards the reaction may come.

5587. But then to whatever extent that stimulus is given it is an advantage to India as long as it lasts, although it is a disadvantage to Great Britain?—Yes; as long as it lasts.

5588. Still, if it is only to last a very short time, it is not necessary to take it into account at all, probably?—It is very difficult to say how long it will last. I used temporary as opposed to permanent.

5589. But if it would last without the alteration, and would cease the moment the alteration which you suggest takes place, it is a fact, is it not, that your proposal would benefit, if it succeeded according to your expectation, the English operative to the disadvantage of the Indian operative?—Prospectively, that is to say. I have taken the opinion of some people who know something about India. They tell me that they do not think that the factories already started would be stopped by the adoption of this bimetallism.

5590. But the future development of India would be retarded by the change that you propose?—But then after all international trade, what is produced by one country and sent to another, must depend on something more solid than mere monetary conditions; it must depend on comparative natural and industrial advantages in the main.

5591. If that is so, if Indian competition is due to natural advantages, why meddle with currency?—Because I say Indian competition at present is not due merely to natural advantages; it is receiving a stimulus one way in exports, and receiving what is practically a protective duty on imports. It is not natural advantages only; there is also a purely monetary disturbance which is influencing the trade of India.

5592. Well, then, so far as you deal with that monetary disturbance by legislation in this country, you will be injuring the operatives of India for the advantage of the operatives of Great Britain?—Yes, but I think on the whole both of them would gain by the adoption of what I have proposed, taking a term of years.

5593. The appreciation of gold is due to the large production of silver and the small production of gold, is it not?—I do not think so. That is only considering the element of supply.

5594. But that is the first cause, the primary cause?—It is one cause that must be taken into account.

5595. And by artificial legislation you could alter that and establish a fixed standard?—But it seems to me that the annual supply of the precious metals is only one element and sometimes a very small element in changing the relative values.

5596. What other elements do you take into account?—All the elements of demand. The principal demand being for coinage, it makes a very great difference if you allow or do not allow these precious metals to be coined. If for example all the nations in the world ceased to coin gold, that would have a very great effect upon the value of gold. The value of gold depends upon artificial causes quite as much as upon natural causes, and the natural production of gold is only one of the elements to be taken into account.

5597. But the chief reason for the present comparative depreciation of silver is its enormous comparative production with gold, is it not?—Not the chief reason, and by no means the true reason. I thought it was admitted in the report of Mr. Goschen's Committee on the Depreciation of Silver, that the additional supply of silver was not sufficient to account for the depreciation that then took place. My own opinion is most strongly that the depreciation is entirely due to the changes in the demand. If the old monetary relations had continued the changes in supply would have made absolutely no difference to the relative values of the precious metals.

5598. Then do you mean by the alteration in the demand the greater demand for gold for such purposes as Mr. Barbour suggests for hoarding and ornament, and uses in trade?—Well, we must take into account all the elements of the demand. There would be the demand for currency as well as the demand for purposes of the arts.

5599. Well, all those demands are in the nature of ordinary and natural causes, for the appreciation of gold?—Quite so, but then the principa demand always for the precious metals has been the monetary demand, and the monetary demand is purely an artificial thing, purely the product of legislation.

5600. But at the present time the people of India benefit, and the operatives of Great Britain in your opinion suffer, owing to the natural increase in this demand and the other causes to which you have referred. Do you think that you are justified by legislation in taking away from India this advantage, and in conferring it upon their fellow subjects in Great Britain?—Well, I think so far as India is concerned that there are a number of compensating advantages which would accrue to India, and it is not certain that there would be any positive loss at all by the adoption of this method. For example, capital would flow to India and the rate of interest would fall.

5601. But you have admitted that unless there is a positive loss to them there can be no positive gain to the operatives of Manchester?—I was looking rather to the future. It is quite possible that in the future, if this depreciation is allowed to go on for a term of years, India might develop certain trades which otherwise she would not do, and then I think that a reaction

would afterwards occur. As far as possible, we ought not to allow any trade to be determined purely by currency causes.

5602. (*Mr. Chaplin.*) Mr. Chamberlain referred you to statistics, and to the fact for instance that savings have increased, and that the consumption of commodities has largely increased as a proof that the condition of the working classes here has not been seriously affected by the present system; may that not be owing to some extent to the great improvement which has been made within the last few years in the compilation of statistics?—Yes, I think that is an element that ought to be taken into account.

5603. You were asked just now whether it was not the fact that there had been no considerable fall in wages, and no considerable diminution in employment so far as the working classes are concerned, and if that was the case, what their loss had been. I want to know if you have any knowledge of these facts of your own. Do you know for yourself that there has been no considerable fall in wages and no considerable fall in employment?—No, I do not; I do not know the statistics of that question.

5604. You are not able to say for yourself, then, whether the evidence which was given by a witness on the last occasion to this effect was true or not. What he said was that our towns had been crowded with unemployed people, and "I never saw such "continuous distress in Liverpool as in the last few "years." You could not say of your own knowledge anything as to that?—I have no means. I can only go on general statistics and statements, and statistics as to labour are not in very good condition.

5605. Your general experience would lead you to believe that there probably has been, I understand, a fall in the prices of their wages and some loss in employment?—Yes, I think so; but in the manufacturing districts not such a fall in wages as might perhaps have been anticipated at present.

5606. You suggested that this loss of employment might not be shown possibly in the pauperism returns, because they might have been living to a certain extent upon their own savings?—That is a statement that I have often seen made.

5607. And when you were asked whether the fact that gold has appreciated during the last 12 years, would not, before this period, have consumed all their savings; do I understand that the effect of that appreciation has been felt during the whole of that period, or has it not been coming on gradually, and only been felt acutely within the last few years?—Well, that is a question which involves the degree of the general depression of trade. I am not able to say in what years depression began to be most keenly to be felt.

5608. Let me ask you one question as to India, and the effect upon the operatives there. I understood Mr. Chamberlain to ask whether the adoption of the remedy that you suggest would not be injurious to the operatives in India, although it might be beneficial to the operatives in England. But is it not the case that it may be said that the present system, at all events as far as the wheat industry is concerned,—I will limit it to that for the moment,—is making the fortunes of the rajahs and the ryots in India, while it is ruining the agriculturists and the agricultural labourers in England?—I think there is no doubt of the injury to the agricultural classes in this country. Of course I have no information as to the matter of fact in India, though I should think that the present state of things gives a great stimulus to the production of wheat in India, and it is quite possible that part of that stimulus may take the form of exceptional profit to the producers in India.

5609. And that stimulus, as I understand you, is afforded by the rate of exchange between England and India, which has been brought about entirely by foreign legislation since 1873?—Yes, I think that the stimulus is due to the fall in the price of silver, which operates upon and is shown through the Indian exchange, and that the fall in the price of silver is due to legislation.

5610. Are you aware whether England is responsible at all or not for the legislation which was adopted at that time?—As far as I know, England did nothing directly, but I suppose there is not much doubt that England refused to make an agreement which other nations would be willing to make. So far there was a want of legislation upon our side. It would have been better, it seems to me, had England agreed to a convention at the former conference.

5611. We have had evidence given before us to the effect that England could not be said by any means to be free from a share of responsibility in the matter; I wanted to know whether that is your opinion?—That is my opinion; in that indirect way.

5612. (*Mr. Barbour.*) Are you aware whether or not England or some authority in England recommended the French to adopt the gold standard?—No, I do not remember that.

5613. (*Mr. Chaplin.*) You were asked in question 3971, whether there had been an universal fall in prices, and that was what at present there was no sufficient evidence of. I understand you have no doubt upon that point, have you?—No, I have no doubt that there is a general fall in prices, but I ought perhaps to explain that that does not mean that there is an uniform proportional fall in prices in every case.

5614. Did I understand you to say this morning that there had been a difference of 25 per cent. generally in prices?—I do not think I quoted figures. The estimate founded on the index numbers gives a fall of from 25 to 30 per cent., I believe.

5615. At all events, whatever the fall may be, you date that fall from the time that silver was demonetised by foreign legislation?—Yes, there has been a fall since that time.

5616. Can you trace it partly to that cause?—I should certainly trace it partly to that cause.

5617. In the reference to this Commission we are instructed to inquire as to the effect of the present system upon the internal trade and industry of the United Kingdom. Are you of opinion that the internal trade and industry of the kingdom has been injured in any way in all of its branches?—Well, there again I should repeat the answer that I gave before, that the loss of profit to the producers must have acted detrimentally upon that important interest, at any rate, the interest of the capitalists, and indirectly upon other classes.

5618. I should like to take the agricultural industry. Are you of opinion that that has been injuriously affected?—I should think the agricultural industry has been mos injuriously affected of any.

5619. And in what branch chiefly?—Well, again it is difficult to give the facts of the case; but I should think, especially on the analogy of other trades, and from general principles, that in the first place the farmer would suffer, then the farmer would throw some of the loss upon the landowner, and some of the loss upon the labourers. In the first place the loss would fall upon the farming profits, that is what I should think; then it would fall upon the landowner, then it would fall on the labourer.

5620. (*Mr. Courtney.*) Do you discriminate between farmers, between producers of different kinds of produce?—Yes, I think that the grain farmers have suffered more than the stock farmers.

5621. (*Mr. Chaplin.*) Several witnesses, or some witnesses at all events, have given evidence to the effect that the present state of things acts exactly like an export bounty upon the wheat that is exported from India to England; is that your opinion?—That is my opinion, under present conditions.

5622. Would you state how that arises?—Well, the fall in the price of silver enables some one in India to sell the same amount of wheat for a less amount of gold than before, because in return for

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this less amount of gold the same amount of silver is obtained. The general position is that silver prices in India have remained practically steady, and as a consequence, so long as the same amount of silver is obtained for the wheat, for instance, the producers in India are satisfied; but owing to the fall in silver, this same amount can be obtained for a less amount of gold, and that causes a fall in the price of the wheat on this side, and in that way it seems to me to operate exactly like a bounty. The general effect of a bounty is to make a fall in the price of the article in the country to which it is sent.

5623. And to give a great artificial advantage to the grower of wheat in India?—So far as he can keep that advantage; so far as competition does not take from him that advantage and lead to the fall in prices on this side. I cannot say how the advantage is precisely distributed.

5624. At page 334 of the Third Report of the Royal Commission on the Depression of Trade, there is a table to which I want to call your attention. Mr. Palgrave says: "By examining this table, it "appears that, speaking generally, every fluctuation "of a penny in the rate of exchange is equivalent to "an alteration of 1*s.* 5*d.* in the price of the quarter "of wheat in England." Are you able to verify that statement; do you agree with it?—I remember reading the figures and quite agreeing with the general statement that the result may be such a fall in the price.

5625. But the effect of that statement as I understand it is this, that the price of wheat in England would rise and fall with the price of silver?—Yes.

5626. And you believe that to be so; you agree in that opinion?—Yes, so far as the Indian production influences the market, and at present, I suppose, it largely does so. I should like to refer to my answer in my first day's evidence to question 4147.

5627 Well, Sir Thomas Farrer asked you on the last occasion whether in the case of the appreciation of gold the loss did not fall on the capitalists and the producers chiefly?—Yes.

5628. I do not want to ask you any further questions with regard to the artizan working classes, but I want to know if you have any knowledge with regard to agricultural wages at the present time, whether they have fallen considerably or not?—Well, I made some inquiries myself since I was last examined here as to agricultural wages in the north of England, and I gather from a very trustworthy source that the wages there have fallen 20 to 30 per cent. in the agricultral districts. The person who gives me that information is a man who holds several large farms in Northumberland under different owners, and who also knows very generally about agriculture in the north, and that is certainly the case with the labour that he employs. He gives me his own figures, showing a reduction of 25 to 30 per cent. in the wages.

5629. Is it not the case with regard to the agricultural labourers that the greatest mischief is not the actual fall in their wages, but the fact that a vast number of them have lost their employment altogether?—Yes, I think that there has been a great loss of employment in the agricultural districts.

5630. Then in that case the chief loss is not limited by any means to the capitalist or the producers, but that the working classes are injured equally also?—The agricultural working classes are certainly injured.

5631. Now, with regard to other commodities, does this system act as a bounty also upon them as well as upon wheat?—Yes, as regards other exports from silver-using countries it seems to me under the conditions so far as we know them of silver prices remaining practically the same in those countries that it must operate as a bounty upon those exports, but whether the bounty will lead to a corresponding fall in prices always or whether it may lead first of all to an increase of profit it is impossible to say in every case.

5632. Well, then with respect to commodities sent from England to India, how are they affected; does that act as a protective duty against them?—I should say that was the best way of desbribing it, that it really acts as a protective duty.

5633. That is, in fact, the English producer is hit in both ways?—Yes.

5634. And this is not owing in any way to natural causes?—Purely to a monetary disturbance.

5635. In consequence of legislation?—In consequence of a change in the monetary policy of different nations.

5636. Well, you have told us what is the remedy that you suggest. I want to ask you what would be the general effect of your remedy, firstly, on the prices of all commodities, and secondly, on the prices of the commodities which are specially affected by the rate of exchange between England and the silver-using countries?—Well, as regards the effect on the prices of all commodities, the general level of prices, I should not be inclined to suppose that so far as this cause was concerned there would be any great inflation of prices. I should rather say that if we return to the condition of affairs which existed before 1873, the utmost we could expect in the rise of prices would be a rise to the normal level before that time; but then when we take into account the great increase in trade and population and the great demand for currency of all kinds, then I should expect that we could not quite attain that level again; the result of this would be a check to the further appreciation rather than a restoration even to the old level.

5637. That would be the case with regard to the prices of commodities generally?—Yes.

5638. What do you say with regard to the prices of those commodities which are specially affected in the way I have described?—I should imagine that the effect on the prices of those commodities which have been influenced by the depreciation of silver must be a rise.

5639. Well, just to sum up what you have said. I understand you would be of this opinion, that if the remedy you propose were adopted it would be beneficial to trade, and it would be beneficial to agriculture in England?—Yes.

5640. And that as far as the agricultural labourers are concerned it would improve their position also?—Yes.

5641. Would you say the same thing with regard to the artizans in the towns?—Yes, I should expect a general improvement in their condition. Perhaps I might mention, as there seems to be some fear of an inflation of prices from abundant supplies of silver, if silver is made a standard metal, that I think it is generally admitted that the persons who gained most altogether in the great gold discoveries were the labouring classes. It is quite possible that if there was an abundance of silver, sufficient to produce a corresponding rise in prices, that the labouring classes would gain very much.

5642. Do I understand you that the labouring classes were the first to gain formerly in consequence of the great gold discoveries, or that in the end they were the chief gainers?—Yes, the impression on my mind from reading Tooke's History of Prices, where great attention has been given to the subject, is that there was an immediate rise, as far as could be calculated, in wages of 20 to 25 per cent. as the effect of these great gold discoveries.

5643. (*The Chairman.*) Was not that in part because the gold discoveries in Australia led to a great many people leaving this country to go to Australia and to their having increased spending power and consequently increased activity arising in commerce generally, shipping and other respects?—Do I understand that the rise in wages was due to the falling off in the supply of labour in this country owing to emigration?

5644. In part to the falling off in the supply of labour in this country owing to emigration, in part to the increased demand for commodities produced by the increased spending power of the people who had

gone to Australia to work for gold, and the necessity for transporting articles of commerce from this country to Australia, which again increased the prosperity of the shipping and other trades?—Yes, I should think all those causes operated. There was certainly a large increase in emigration from this country to those countries. There was a special difficulty in getting sufficient agricultural labour in the country.

5645. I mean those causes would operate, and operate quickly, quite independently of an increase in the volume of the currency?—But then I should not suppose that if the same amount of wealth had been produced in some other form in Australia that that would have produced the same effect as it did, taking the form of gold. I think that the effect of a great discovery of the precious metals is altogether different in kind, and in directness from, supposing it were possible, the discovery of a similar amount of other wealth. In support of this view I may quote a passage from Tooke, Vol. VI., p. 190. "A sud- "denly increased supply of no other commodity "would produce effects so decided and rapid for the "simple reason that (say) a tenfold quantity of no "other commodity could find an instantaneous and "impatient market."

5646. (*Mr. Chaplin.*) Then I understand you that if the result of the remedy that you propose was to cause a certain rise in prices that the working classes would distinctly be gainers, in your opinion, by that operation?—Yes, I think that this check to falling prices would benefit the working classes, and I think that follows from the generally accepted view now as to the way in which wages are determined. Both wages and profits are really paid out of the price which is obtained for the product. If prices fall the whole of this fall in prices cannot be continually taken out of profits, especially considering the small proportion relatively of profits; it must ultimately fall on some form of labour.

5647. Well then, you say it would help trade and agriculture, which are the two great industries of the kingdom, and that it would benefit the working classes also?—That is my opinion.

5648. Would it injure any other classes, and if so, what class, and how?—The answer would depend upon the extent of the rise in prices. If there was, as I do not suppose there would be, a very great inflation of prices, the people who would suffer principally would be those in receipt of fixed incomes. Those classes would suffer who were enjoying the benefit of former contracts. Middlemen also might suffer, and so far the consumer would not.

5649. Those enjoying the benefit of former contracts would lose because, to some extent, gold might lose part of its purchasing power?—Yes, and that is the way in which they would lose.

5650. They would be, I presume, then a very limited number of people compared with those whom you anticipate would gain?—I think the number of those whose incomes would not be raised by a rise in prices must be very small compared with the mass of the people of the country. The incomes of the mass of the people of the country feel very soon movements in prices, but it is only a comparative few who obtain fixed salaries, and so on.

5651. It has been urged by some witnesses that there are considerable objections to be raised to your proposal, some contend that it would vitiate contracts; others that the gold would leave the country; and again, others maintain that there would be an immense difficulty in maintaining a fixed ratio between gold and silver. Do you believe in any of these objections. Have you any apprehension of consequences of that kind?—Well, these are objections which I have very carefully examined, and on which I have published papers, and I do not think myself that they are of any force. I would answer them, if you wish, more in detail, but that is my general conclusion.

5652. (*Mr. Courtney.*) I understand you to say that the effect of either a greater production of silver and the diminished production of gold, or else of the dislocation of the relation between silver and gold in consequence of the cessation of free mintage has operated in India by way of a bounty to the producer?—That seems to me the best analogy, yes.

5653. Whereby wheat can be brought from India and sold here at a less cost than would otherwise have prevailed?—Yes.

5654. And you lay down the principle that that is an injury to the people of this kingdom?—I admit that getting wheat cheaper than otherwise they would do benefits the consumers of wheat, as long as it lasts.

5655. No doubt the consumers of wheat, but the kingdom, I said?—Well then, on the question of the kingdom, it seems to me that we have to take into account a summary of all the various interests affected, for instance, the interests of the agricultural labourers that I have just been asked about.

5656. Well, I wish you to take into account in your own mind all these interests, and to answer the question whether the operation of that cause which produces the effect that wheat is sold here at a less price than it otherwise would have been sold at is an injury to the inhabitants of this kingdom?—I think that when we take into account the loss sustained by agriculture, and the probability that the wheat, at any rate, would never rise to any great height if this change took place, the change would be an advantage. On the whole, I think the change would be an advantage.

5657. On the whole, what change would be an advantage; the introduction of wheat at a less cost would be an advantage?—The change which would neutralise this cheapness due to the depreciation of silver.

5658. Wheat is imported into England and sold in England at a less cost owing to the operation of a certain cause, than otherwise it would have been imported and sold at; is that an injury to the people of this country?—Well, it is not an injury to the consumers of wheat, that is all. It is impossible for me to add up all the different effects and give you an answer to the sum after it is added up. I must take them one by one. I say the agricultural labourers are injured by it; the farmers are injured by it.

5659. And you cannot venture upon an estimate of the effect upon the general well being of the mass of the inhabitants?—I cannot make a reasoned summation at a moment's notice, it is impossible.

5660. Suppose twopenny loaves rained like manna from Heaven every morning, would that fact be injurious or beneficial to the people of this kingdom?—I do not quite see the meaning of the question. I acknowledge, of course, that cheapness is a good thing for the consumers of certain articles. We must also consider producers of the same articles. It is very difficult to estimate the gain of the one and compare it with the loss to the other. Suppose, for example, that the cheapness only lasts sufficiently long to ruin the agricultural interest of the country, that land goes out of cultivation, and buildings and improvements are not kept up. The nation might pay very dear in the end for this temporary cheapness.

5661. (*The Chairman.*) I suppose you would say that if the same cause which produced this cheapness was operating at the same time to reduce the purchasing means of those who could purchase, that that must be taken into account in estimating the total result?—Yes, so far there might be no gain.

5662. (*Mr. Chamberlain.*) Would you entertain the same doubt as to the general result of the imposition of a 5*s.* duty on corn. That also would, according to your view, benefit the agricultural labourer and the farmer, would it not?—Yes, I suppose it would.

5663. And you would feel yourself unable to say whether or not the destruction of our free trade theory and the imposition of a 5*s.* duty on corn would be a good or a bad thing for the country?—Well, there again I should have to reckon up what would be the danger of admitting any exception to all free trade principles, what would be the practical effect of the abandonment of a general policy. If I might say

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anything about the question of free trade, I think, theoretically, it is quite possible to conceive of certain exceptions, but taking the whole question you have a general impression that the policy is so important for this country that you would have to consider very carefully before you ever thought of making any change of that kind. Continental nations are applying protection to wheat.

5664. But if you are convinced that the effect of a change in the currency which would increase the price of wheat in this country, would be good for the labourer and the farmer, and you are uncertain whether on the whole it would not be a good thing for the country, I suppose exactly the same answer would apply to the proposal to put a 5*s.* duty on corn?—There would certainly be benefits. By a 5*s.* duty on corn there would be benefits to the agricultural interest certainly.

5665. (*The Chairman.*) I suppose you would say that the 5*s.* duty on corn would not affect the general spending power of those who purchase corn, in the same way as you say changes in the currency might?—Well, it is very difficult to trace the indirect effects of any duty; possibly the effect would be to lessen the spending power whilst the proposed change in currency would increase it.

5666. (*Sir T. Farrer.*) On the same ground you would doubt whether the making of the Suez Canal, the cheapening of freights, and the opening up of India by the railways, by which corn has been introduced so cheaply into this country, is a benefit to this country or not?—Yes, I think it might be doubted, just as it is quite possible that owing to some change of that kind which benefited the world as a whole, one particular country might lose its commerce. It is said, for example, that the discovery of the Cape route to India ruined the towns of northern Italy.

5667. We being the great purchasers of the commodity which is so cheaply produced?—But then we are also producers of that commodity. Agriculture is still our most important industry.

5668. (*Mr. Barbour.*) May I ask you one question? Do you think that under any circumstances it can be a good thing that the producer in one country should have a bounty as compared with the producer in another country?—I think that the system of bounties for the world at large is certainly a great source of mischief.

5669. Do you think a bounty on wheat from India would be an injurious thing to the Empire as a whole, including both India and England?—Anything in the nature of a bounty or a monetary disturbance which acts like a bounty is prejudicial to this country and to India, taken together. If it is not it would be a good thing for the Empire if all our colonies gave export bounties or adopted a silver standard.

5670. (*Mr. Courtney.*) Mr. Barbour called your attention to the great increase in the production of gold between 1850 and 1873 in relation to the production of silver and to the steadiness of the relative price of gold and silver during that period; and he asked you whether you agreed in the conclusion that the price of gold and silver depended rather more on the demand than on the supply?—Yes.

5671. And you did agree with his conclusion?—Yes.

5672. (*Mr. Barbour.*) I think my exact words were that we were to look for the causes of the variations in recent years rather to the demand than to the supply?—Yes, I should put it in that way; we must always consider the supply as well as the demand.

5673. (*Mr. Courtney.*) There were variations in supply between 1850 and 1873 which did not produce a variation in the price of gold and silver?—Yes.

5674. There has been a variation in the price of gold and silver since 1873, and that must be ascribed to the variation in demand, and not to the variation in supply?—I think it is due to a variation in demand; that is to say, a change in supply that has occurred would not, if other things had remained the same, have produced a change in the relative value.

5675. You think those questions and answers are exhaustive in that part?—Not in that brief form in which you have put them now.

5676. Is it not very necessary to take into consideration the existence during the first period of free mintage in France which has not existed since; so that the effect of the variation that has arisen since 1873, which did not arise before 1873, may be ascribed to the cessation of free mintage?—Certainly; I mentioned that as one of the causes that I thought did operate.

5677. (*Mr. Barbour.*) Would you look upon the cessation of free mintage in France as an alteration of demand?—The difference is between using silver really as token money and coining any quantity brought to the mints as standard money.

5678. But may I ask if you look upon cessation of free mintage as a reduction in demand?—Yes, it is equivalent to a reduction in demand. I should look on it in that way.

5679. (*Mr. Courtney.*) Now, the prime factor in determining the value of the precious metals is its use as money?—Yes, certainly.

5680. A prime factor in determining the amount of the precious metal which is produced is the combined possibility of its use as money?—Yes, I think that operates, certainly.

5681. And if the nations united together to agree that gold and silver should be equally applicable to the payment of debts in the relation of 15½ to 1, that would have a considerable influence on the production of gold and silver?—I think that the condition of things would be like it was before the change took place.

5682. (*The Chairman.*) But I thought since the change in demonetising silver took place you had not had less silver produced but more, and not more gold produced but less?—Well, so far of course I would say that, owing to the fall in the price of silver relatively to gold, there has been or there may have been a contraction of the production of silver, and so far there may be an increase again in silver. As regards gold there can be no such increase, and there might possibly be a further slight falling off in the production of gold, owing to this cause. I should certainly admit that if you raise the price of silver reckoned in gold you tend to get greater supplies from the mine, so far as that cause may operate, but I do not think that the effect would be very great.

5683. (*Mr. Courtney.*) Well, the miners are speculative people, but even miners will not carry on mines at a loss?—We must take into account the differences in the relative production of the various mines, and it is only the mines on the margin of mining, or whatever the phrase you choose to describe it, that would be affected. The good mines and the more productive mines would still continue to produce whatever the prices were, within any reasonable limits.

5684. Mines are abandoned and opened?—Yes.

5685. Abandoned because they cease to be profitable, and opened because they promise to be profitable?—Yes.

5686. If you had a general law amongst civilised nations, that silver should be to gold in the proportion of 1 to 15, you would have silver and gold produced roughly under conditions that the gold cost 15 times as much labour to put upon the market in a civilised country as silver?—I do not think that follows at all, because it may be that the gold can be produced for nothing at all, and yet, owing to the limited quantity of it, it might still be of that value. I do not think that the cost of production element enters in, in the way you suggest.

5687. But there is neither gold nor silver as the amount that can be produced absolutely fixed; there is a margin of production?—There is a margin of production, yes.

5688. You can always get more with greater labour?—Yes, a certain amount.

5689. Well, is not that margin of production one or other, speaking roughly; would not that be fixed by the law of ratio established in the market where both are brought for sale?—No doubt the margin to which the mining was carried would depend partly on the ratio. If, for instance, silver measured in gold, were to sell at 60*d.* per ounce instead of 46*d.* per ounce, that might lead to the opening up of some silver mines.

5690. Or possibly to the shutting up of some gold mines?—Or possibly to the shutting up of some gold mines, though that, I think, would be much less likely.

5691. But why now, if you declare that 15 ounces of silver shall be of the same use in London as one ounce of gold, and you can produce now 20 ounces of silver and bring it to London at the same cost as one ounce of gold, is it not clear that the people would come to the silver rather than to the gold, and that the producers of gold would be put to a disadvantage, and would gradually work off their less profitable workings?—But I cannot understand how the cost of production could possibly operate in that manner. It is not as if it were open to the workers in gold mines to go and work in silver mines, and produce silver instead. You cannot get a transference of capital from gold mining to silver mining; it could only operate in a very indirect manner. There would be an encouragement to invest capital in silver mines rather than gold, and I do not see that it could operate to a greater extent than that.

5692. A gold mine would find that its cost of labour and materials relatively to what the produce was, was continually increasing, that the enterprise was less profitable, and it would gradually diminish, and ultimately might be abandoned?—Yes; but so long as the gold mine yielded any profit at all the gold mine would be worked. I should imagine that the greater part of the return to the owners of gold mines is really a form of rent, and until the whole of that had disappeared there would be no cessation of the gold mining.

5693. But are you at all acquainted with the circumstances of gold mining in Australia. You suggest that the greatest part is in the form of rent?—I say that the production is under different circumstances. If you take the first effect of any change then you would only operate upon that part which was produced under the most unfavourable circumstances. I presume, in taking gold mining on the whole, that gold is produced with different degrees of cost, and you would only operate upon that element which is produced at the greatest.

5694. No doubt "the margin of cultivation," to use a classical phrase, would feel it most, but gradually there would be a contraction of gold production?—Unless there was such an effect on general prices as to raise the wages of the gold miners and the cost of machinery, and so on, there would be no contraction of gold production.

5695. But is it not reasoning in a circle to say that differences in supply do not affect the relative price of the metal when in truth the differences in supply are determined by the relative price of the metal?—I do not see any difficulty. I can quite understand how the differences in the annual supply depend upon not only the relative differences in gold and silver, but the general level in prices. That seems to me quite clear, and yet the annual supply operating through the infinitesimal addition to an immense stock has a very small influence.

5696. Mr. Barbour spoke of the possibility of a general increase in wealth leading to a greater consumption of gold in ornaments in domestic use and a consequent still greater appreciation of the standard?—Yes.

5697. But would not the greater increase of wealth be a function of the quantity of gold used for domestic use and ornaments, or rather, would not the quantity of gold used for those ornaments be a function of the general increase of wealth?—Certainly, that is what I understood Mr. Barbour to mean, that the amount of gold used for the purposes of the arts, ornaments, and so on, would be a function of the growth of wealth in the community.

5698. And under a natural system, would not there be the same movement in the standard; would not that be a function of the general wealth of the community?—I am afraid I do not follow.

5699. Supposing the general increase of well-being is such that people with the same quantity of labour, so to speak, could go to the sacrifice of providing themselves with a gold watch, ought not, on the other hand, those who have a claim to a sovereign, or the possession of a sovereign, expect that that sovereign would in the same way represent a varied command of the use of labour?—That is, we ought to expect a variation in the purchasing power of the standard.

5700. Do not the two things go together? They depend on the same causes?—Yes, they depend upon the same causes, but operating in different ways.

5701. Is there anything to object to in the two operations being conjoined?—Well, the difficulty, as I understand it, is that you abstract from the available supply of gold for currency a certain amount, and use it for the arts and so on. At the same time you get a constant increase in the demand for currency, if you are to keep prices at the same level. Well, the supply is not forthcoming, and so prices fall; then you have the difficulty of a changing standard, and I should say the less change you get in your standard the better.

5702. (*Sir T. Farrer.*) I do not think I quite understand what you look to as the ideal or *summum bonum* in the standard. Is it that the same quantity of the standard should at all times be exchangeable for the same quantity of the same commodity?—I do not think that, because that would imply that you would get no change in the relative prices, that prices would always remain permanently fixed in the same manner. That is impossible, I should think.

5703. But in order to follow up Mr. Courtney's question concerning the relation of wealth to the standard, let me ask you this, supposing gold to be the standard and supposing further that we had only one commodity—wheat, that the supply of gold remained absolutely constant, but that the supply of wheat was doubled from improvements in agriculture and transport, should you think it the *summum bonum* of the standard that the same quantity of it, say 2*l.* or 40*s.*, should exchange for one quarter of wheat?—It is very difficult for me to look upon the standard as measured by one commodity.

5704. But I want to get at what you were looking for when you were talking about an ideal standard?—Well, I would illustrate it perhaps best in this manner, that I think nothing can be worse for a country than the adoption of inconvertible paper. It leads to a fluctuating premium on gold, and that really means a fluctuating purchasing power, which is the worst thing that could happen to a country. Well, so far as gold approximates to that, gold is a bad standard.

5705. Let us make a further hypothesis; supposing that all the commodities exchangeable against gold, or measurable in gold, which is perhaps a better phrase, are doubled in quantity at the same cost in labour or human effort, while the quantity of gold remains the same, should you think it a defect in the standard if the same quantity of gold then purchased double the quantity of commodities?—That is to say, should I think it a disadvantage if prices fall away to increased production?

5706. Yes?—No, certainly not, because I should say that any relative fall in prices due to decreased cost of production must be shown in that manner.

5707. (*Mr. Barbour.*) But do I understand you to mean that if production is cheaper it is still better for the world if the standard keeps pace with the cheapening of production, so that prices are always the same?—But then my difficulty is whether I am

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to understand all commodities to be increased in the same proportion, which is a very difficult position to take up, or if I am to understand that you get some particular commodity cheapened. I think it is necessary that any diminution in the cost of production of a particular commodity should be shown by a fall in its price and so over a large number of commodities.

5708. (*Sir T. Farrer.*) I wanted rather to illustrate Mr. Courtney's proposition about the wealth of the country. I want to know whether, supposing the wealth of the country doubles, that is to say, suppose all the commodities which people use are doubled with the same expenditure of human labour, while gold remains the same, and the same quantity of gold consequently buys twice as much of every commodity, whether you would consider that a defect in the standard?—Well, then I should think that it would be better if everything were doubled, and the number of transactions were doubled, and the number of people were doubled, it would be better for gold also to be doubled.

5709. It would be better that the foot rule should be doubled as well as all the other things that are measured by it?—I should think so.

5710. (*Mr. Barbour.*) Do you think the change should be described as a doubling of the foot rule. There is no close analogy between the measure of extension and the measure of value; is it not rather that the foot rule should remain the same?—It is very difficult to seize the exact point of any analogy at once, but I do not see that there would be any objection theoretically if you suppose everything doubled to have the quantity of money doubled also. In that case nominal wages would remain the same, in the other they would be halved.

5711. (*Sir T. Farrer.*) You spoke rather positively about the effect of this depreciation of silver upon the price of Indian commodities, and especially upon wheat, have you examined the data that we have had before us, papers by Mr. O'Conor and others, as to certain causes which have cheapened Indian commodities, such as transport and railways, freights, &c.?—Well, I have looked into these papers, but I certainly did not mean to express myself positively at all as to the influence on the final price of wheat; all that I was doing was to take the effect of one particular cause, and to say that, so far as that was concerned, it ought to operate in that way; it may be neutralized by other causes.

5712. You have not looked at the other causes which operate, to see whether those causes are sufficient in themselves to account for the fall in Indian wheat?—I should take it up analytically that if you have a fall in the price of silver that of itself does permit of the Indian wheat being sold at a cheaper rate.

5713. But you have not looked into the actual causes which operate to see whether there are not other causes which ought also to operate to make them fall?—I can only refer to my former answer to question 4147.

5714. Now, let me take a statement you have written with care, and therefore I would rather take it than what you have said to-day. You say: "Observe now "the consequences which follow from the failure of "Indian prices to move in correspondence with the "fall in silver. Prices in India being the same, or "indeed a little less, the producer of wheat, or any "other Indian staple, will gain quite as much as "before, as well as have the same real income in "India, if he obtains the same number of ounces of "silver as he did. If, however, in London, an ounce "of silver, reckoned in our currency, is worth 25 per "cent. less than it was, the Indian can sell his commodity for a gold price, less by that per-centage, "and yet obtain his usual or profitable number of "ounces of silver." Now I want to ask you whether that does not assume that a rupee is worth 1*s.* 6*s.*, or 1*s.* 6*d.* worth of commodities in London, and 2*s.* worth of commodities in India, at the same time?—I adhere to the quotation you have made.

5715. Well now, does not that assume that a rupee is worth 2*s.* worth of commodities in India and only 1*s.* 6*d.* worth of commodities in London. I want to know whether it is possible that a rupee shall be worth 1*s.* 6*d.* worth of tea or wheat in London, and, at the same moment, worth 2*s.* worth of wheat in Calcutta?—I am afraid I have not followed the point in your question as bearing on this assertion of mine, because what I say is that the effect will be the reduction in this gold price on this side, so that, so far as the wheat is concerned, you would get the same price.

5716. (*Mr. Birch.*) Would you allow me to put the real meaning of it. It is this: he sells for 1*s.* 6*d.* in gold, that is the difference. It is 1*s.* 6*d.* in gold, not 1*s.* 6*d.* in silver, because 1*s.* 6*d.* is simply token coin, whereas the 2*s.* in India is a real coin; that is the difference?—I agree with Mr. Birch's statement.

5717. (*Sir T. Farrer.*) I perfectly understand that. I am speaking of 2*s.* and 1*s.* 6*d.* as fractions of a sovereign. I want to know whether I am right in my construction of your paragraph. Whether that construction is true, and if not where is the bounty?—The point that I wish to bring out by saying it is a bounty is that it leads to a reduction in price, like every other bounty.

5718. You told us that you did not know where the extra sixpence went to, whether it was the profit of the Indian rajah or ryot, or where it went, but there is, according to your account, sixpence to play with, and I want to know where that sixpence comes from. Is not the real fact this: the man in England spends 1*s.* 6*d.* on his rupee, but that 1*s.* 6*d.* is gold, and, gold having risen, it is as much as 2*s.* was before?—Yes, that is the monetary position.

5719. Therefore, the real thing is that gold has risen in England. He buys his rupee; the rupee is worth 1*s.* 6*d.*, and he buys with his rupee the same quantity of wheat that he could originally have bought with 2*s.*, it is true, but it is because that wheat has fallen from other causes in the same way in which the silver has fallen. You do not think it possible that a rupee can be worth one quantity of a transportable commodity in London and worth a separate and a different quantity of the same commodity in India?—No, not more than by the cost of carriage and other reasons of that kind.

5720. (*The Chairman.*) I understood your position to be this; that owing to the change in the value of silver, as compared with gold, a lower gold price here gave to the producer the same silver price there?—Yes, that is my position.

5721. That he was content to get the same silver price because he paid wages in silver, and the other burdens that fell upon him were payable in silver?—Yes.

5722. And so his position being to him, apparently, the same, getting as much silver as he did before, he was content to sell at a lower gold price than he would have been?—Yes.

5723. (*Sir T. Farrer.*) That is on the assumption that gold is appreciated?—I think we can separate the direct effect of the depreciation of silver from that of the appreciation of gold.

5724. In that case the producer in England will also have had his expenses reduced; gold will have appreciated against all things in England as well as in India?—But I do not see that we bring in the question of the appreciation of gold at all. This is an illustration of the effect of the direct operation of the depreciation of silver.

5725. (*The Chairman.*) Supposing that he gets a lower gold price here (which is the hypothesis), which brings him the same number of rupees that he got before, I am not quite sure that I can see how that stimulates production there. If he, owing to the change, got the same gold price, and therefore, more silver rupees, and therefore made the transaction more profitable, I can understand that stimulating production; but if

the net result is to bring the gold price down, by reason of his being content with the same number of rupees as before, I do not see what there is to stimulate production?—When it arrives at that limit, there would not be any stimulus of that kind; but it seems to me to operate just as bounties on production or on exportation from foreign countries. In the first place, there is an attempt on the part of the producer, or on the part of the importer, or on the part of those who have to handle the corn, to keep the bounty to themselves; but then this constant attempt to keep that bounty to themselves is finally defeated by competition.

5726. But then, when it has arrived at that point, there ceases to be a bounty?—When it has arrived at that point there ceases to be a bounty; but any further fall would act again as a bounty.

5727. (*Sir T. Farrer.*) Then what you mean is, what we have heard before, and what other witnesses, when pressed, have come to, that the bounty really consists in this, that pending the adjustment of prices, the producer in England has to pay the same nominal wages and expenses as before, but which, owing to appreciation, are really larger than before, while the producer in India had to pay no more than he had before?—That is the real adjustment.

5728. But when the adjustment is effected, then that bounty ceases?—Supposing all the elements in cost of production are adjusted, then it would cease.

5729. I want to ask you one question with regard to the figures which Mr. Barbour put to you. He put these figures, I think, that from 1493 to 1850 there had been 650,000,000*l.* of gold produced on the whole, out of which, of course, a very large amount must have been wasted or consumed before 1850; that from 1850 to 1885, 890,000,000*l.* had been produced, of which also a certain quantity must have been consumed. Well now, supposing your remedy is adopted, and you bring in silver to the assistance of gold, remonetize it, the amount of silver, I think, produced from 1850 to 1885, was 480,000,000*l.*?—Yes.

5730. Now, if I understand the effect of bimetallism, it would not be to raise the value of silver as money by more than one-fourth, or more than it has fallen, would it?—No.

5731. Therefore, what you would bring in to the assistance of gold would be certainly not more than one-fourth of the 480,000,000*l.* as compared with the 890,000,000*l.*?—Yes.

5732. Well now, if the demands upon gold have been so great during the last 15 years that we want a very much larger quantity of money for our standard, how long and to what extent will this addition of silver to the gold have any such effect as you desire?—All that I said was that it would operate to a certain extent in assisting gold and in preventing this appreciation, but I tried to bring out the fact that the effect would not be very great. We should still get the appreciation going on even if we had the two metals.

5733. So that it would be only a very small depreciation, would it, of the present value of gold. If, during these last 15 years, we have so largely consumed gold as to make the 890,000,000*l.* produced since 1850 insufficient for our wants, then the present addition of about 100,000,000*l.*, which would be the additional value given to silver, would make uncommonly little difference, would it not?—Then there is the other fact to consider, of making the two standards.

5734. But that is quite a different point. My present question is only with regard to the scarcity of gold?—Yes, the position that I have always taken up is, that even with the two metals together, we shall still have appreciation going on.

5735. It is a very difficult thing to distinguish between what you can look on as being hoarded and used for ornament, and what you have available for currency purposes; it is very difficult to draw the line?—In the operation upon prices.

5736. You cannot tell when the French peasant may be tempted to bring his gold out of his stocking or the Indian peasant take off his wife's bangles to be coined?—We cannot tell that, but till they do so they cannot operate upon prices.

5737. (*Mr. Barbour.*) I think you said that the general level of prices depended upon the amount of gold left over as currency, after all other demands had been satisfied?—Yes.

5738. And probably the amount left over as currency may be very much less than the total producion of gold, since 1850?—Yes, certainly.

5739. Then if the amount left for currency happens to be very much less than the production, an addition of not very many millions to it might make a considerable difference in prices in the future?—Yes, it might do so, certainly.

5740. (*Sir T. Farrer.*) Have you thought what would be the effect of adopting bimetallism with a ratio of 15½ to one in India, first of all, on the supposition that India were included in the bimetallic League, and secondly, on the hypothesis that India were excluded. Let me ask you first, would you include India in the Bimetallic League?—Well, I have never thought out very carefully the different points in that question; naturally I should be inclined to include India.

5741. Suppose India were included, what would be the effect of adopting the ratio of 15½ to one upon India and upon the currency in India?—I should not think there would be any difference on the currency of India. I should think it would still mainly consist of silver.

5742. You do not think gold would go there any more than it does at present?—I cannot see any reason why India should change its actual currency from silver to gold.

5743. I was not asking so much with reference to that as to what would be the effect on the value of the Indian currency. Would it raise it by 20 or 25 per cent.?—Would the total mass of Indian currency rise in value, supposing India had so many millions of silver?

5744. Yes?—It would compared with the present prices on this side; it would raise it, but not in India.

5745. You think it would make no difference there?—No, no difference.

5746. But it would make a difference in its value for the purposes of export?—For purposes of export.

5747. And that would raise the value altogether, I suppose, would it not?—I do not think the adoption of bimetallism would make any difference on the general level of prices in India, because India would still use silver, and have the same amount of it.

5748. But you think it would make a difference on the level of prices here?—General prices on this side would rise to some extent.

5749. Why on this side and not on the other?—Because India already has silver, and it would not affect the currency of silver.

5750. But if it made the silver much more valuable for export in India, would it not cause an export from India or prevent an import of silver into India?—But I do not think the condition of trade would ever be such as to lead to the export of silver from India.

5751. But how could it have an effect on one side and not upon the other?—I am afraid perhaps I have not understood the question you put as to the value of the currency.

5752. Let me put it again more clearly. If I understand you, the adoption of the bimetallic system would have the effect of raising the purchasing power of silver in this country, at any rate?—Yes, silver would at any rate obtain more gold, and unless commodities rose in equal proportion, more of them too.

5753. And would it have the effect of raising the purchasing power of silver in India?—I think the general level of prices in India, being silver prices, would remain the same, and silver would fetch the same as before.

5754. (*The Chairman.*) You say that the change from 15½ to 1, to 20 to 1 in the relative value of silver and gold, has not affected silver prices in India, as a matter of fact?—Apparently not, as I understand it.

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5755. (*Mr. Birch.*) But would it not affect them, supposing prices remained here the same? Prices would have to fall in India to meet a rise in the exchange?—I do not follow that. I do not think prices on this side would remain the same.

5756. The so-called bounty would disappear?—In my view the so-called bounty has caused a fall of prices on this side, not a rise in India.

5757. (*Sir T. Farrer.*) I am taking England as a gold-using country, and India as a silver-using country, as a case on which to try the bimetallic system, and I want to understand what would be the effect; do you think that the adoption of this bimetallic system would be slightly to raise the level of prices in England, or make it higher than it would otherwise have been?—Yes.

5758. Would it have any, and if any, what effect on the silver prices in India?—Unless silver were sent to the East, general prices in India could not rise. Of course, articles of trade between the two countries would be the same, allowing for transport.

5759. It would make silver slightly more valuable here, and therefore it would make it a less desirable article of export?—So far.

5760. That would diminish the supply of silver for India?—It might not be sent to India in such quantities, so far.

5761. And in that way it ought, theoretically, to cause a fall in prices in India, ought it not?—So far.

5762. (*Mr. Barbour.*) There is a great deal of silver sent to India at present, is there not?—Yes.

5763. And there is good reason to believe that a large proportion of that silver is hoarded?—Yes, I have seen that stated. Of course I have no information.

5764. Assuming that to be the case, that silver would have no effect upon Indian prices?—No.

5765. But if that silver instead of being sent to the East had been coined in France, it would probably not have been hoarded to the same extent, and would have had an effect on prices in the West.

5766. (*Mr. Fremantle.*) I understood you to infer, in answering Mr. Chaplin, that the failure of the Paris monetary conferences was due to the action of England?—That was my impression, that England refused altogether to have anything to do with any international convention.

5767. And are you aware that the resolutions which were passed at the Conference of 1878, and which did not recommend the adoption of bimetallism, were proposed by M. Léon Say, the President of the Conference?—Well, I have not read the report recently.

5768. The third resolution ran as follows: "That "the differences of opinion which have appeared, "and the fact that even the States in which the "double standard exists, find it impossible to enter "into any engagement with regard to the unlimited "coinage of silver, precluded the discussion of the "question of establishing an international relation of "value between the two metals"?—I cannot recall the resolutions which were come to, but my general impression from reading the evidence was that it was the refusal on the part of England to entertain the proposal at all which made it impossible for the proposal to be adopted.

5769. Well then, at the Conference of 1881, no resolution whatever was proposed?—It was well understood, at least I gathered so from the report, that the English commissioners were instructed to entertain no proposal.

5770. Apart from that, there has not been any thing like a consensus of opinion on the part of foreign nations in favour of the adoption of bimetallism, as shown at the conferences?—I am not able to say that there has been; but still I should have been inclined to think that at the present time the United States, France, and Germany, if England agreed, would also be willing to agree, but I have no special information.

5771. Do you not think that it is rather for foreign countries, some of which have had experience of bimetallism already, to raise this question, than for England to come forward with offers of new arrangements?—I do not know whether it is for England to take the lead in such a measure. I am not able to give an opinion merely on a question of policy. It would be quite enough, I should think, if England were to express no unwillingness to entertain the proposal.

5772. (*The Chairman.*) You exclude from the volume of currency which would affect prices all gold, supposing that to be the standard, which is used for ornament or hoarding?—Yes.

5773. You include all the rest?—Yes, I think so.

5774. Well, the gold that is not used for the purpose of ornament or for hoarding would be gold, either turned into coin, or held as reserves by banks?—Yes.

5775. Now, when this special demand for gold arose in Germany, can you tell us whether that diminished the coinage in gold-using countries or diminished the reserves?—I have no information as to the exact sources from which the supply of gold came for Germany.

5776. Supposing that gold went from France to Germany, and the gold that went from France to Germany were replaced in France, if not by coined silver by silver reserves, that would have no effect upon the volume of the currency, would it, at all?—No, so far I should think there world be no effect on general prices. So far as that was concerned, it would be merely the substitution of one metal for the other between two countries.

5777. When the transaction was completed, Germany had so much less silver, so much more gold; is there any evidence to show that, taking all the countries together, the volume of the currency in the sense in which you have explained it, that is, coinage and what was held in reserve, was less than it was before?—That the volume of the currency was less?

5778. Yes?—I am not able to give any statistics; that was my impression.

5779. It would not necessarily be less, would it?—Not if the gold were drawn from silver-using countries. If the gold were drawn from bimetallic countries, which would take silver instead, then it would not necessarily be less.

5780. But it must have come in some such way, must it not, unless you have had an actual diminution of the coins in use by some country, or an actual diminution of the reserve?—Well, I thought it might come, to a large extent indirectly from undeveloped countries, because those countries were indebted to countries on this side. That was my impression, but then I am not able to quote definite evidence in support of that view; but that is one way in which it seemed to me that the diminished gold might act upon prices.

5781. Or do you think it possible that, to a certain extent, it was got by diminished supply at the time, for the purposes of ornament?—I do not think it could be obtained in that way.

5782. Or hoarding?—There again it possibly might come from hoards. I do not know whether the French peasants hoard gold as well as silver.

5783. So far as it came from hoards it would not affect the volume of the currency, in fact, so far as it came from hoards, it would be so much brought into currency, which did not form part of the currency before?—Yes; but then it would displace silver, which would become a commodity.

5784. But that would leave things as they were?—It would so far leave things as they were. I am only able to give a theoretical opinion on the possible sources of the supply. I cannot say as to the facts where the supply really came from.

The witness withdrew.

Adjourned till Monday.

Twenty-third Day.

Monday, 23rd May 1887.

PRESENT:

THE RIGHT HON. LORD HERSCHELL, the CHAIRMAN, presiding.

MR. D. M. BARBOUR, C.S.I.
MR. J. W. BIRCH.
MR. HENRY CHAPLIN, M.P.
SIR T. H. FARRER, BART.
MR. C. W. FREMANTLE, C.B.

MR. GEO. H. MURRAY, *Secretary*.

MR. HENRY HUCKS GIBBS recalled and examined.

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5785. (*Mr. Birch.*) I believe that to carry out your bimetallic scheme you consider it imperative that there should be an accord of nations, and have stated in some of your writings on the subject that such a thing is clearly possible, and that all doubts raised by people of the contrary opinion have no foundation?—I never like to say that other people's opinions have no foundation whatever, but I think that whatever the foundation, the superstructure they build is incorrect, for I have no doubt whatever that such an arrangement could be made.

5786. I do not know if you have read an article on "Coin and Coinage," by Rice Vaughan, 1675, published in "Select Tracts on Money." I was struck by a paragraph which bears on this subject, and I wish to ask what you have to say with regard to it. He says: "Amongst all the remedies pro- "pounded against the alterations of moneys there is "none more specious than this, nor more frequent in "mention, both in provisional edicts, which are made "for the reformation of moneys, and in considerations "held for the purpose, for it is said to advance it. "That if we contract with other nations for a certain "and stable standard of moneys which may be equal, "then we shall avoid all the inconveniences that do "grow by the raising of moneys, because we shall "never raise them; and we shall avoid all the incon- "veniences that do grow by the not raising of moneys, "because other nations shall not raise theirs. Besides "for this remedy there is alleged the example of "former ages, wherein it appears that in many "treaties with foreign nations our kings did contract "for the mutual standard of their moneys. But "however the propositions be, specious and frequent, "yet, of all other remedies, if it be thoroughly "examined, it will appear the most difficult, or rather "impossible to be effected." He then gives certain reasons, and goes on: "But suppose it was possible "to draw all those countries to a certain contract, "what would be the use of it? I did, in a former "chapter, observe that most countries, and particularly "France and the Low Countries, do seldom or never "raise their moneys; but when people by custom "and general use have raised the money beforehand "beyond the publick declaration, and the State is "forced to follow the people, whom, in this case they "do not master, to what end is it then to contract "with those nations for that which is not in their "power to observe? And that which is alledged for "the course of contracting, with forrein nations, out "of the example of former times, doth clearly con- "vince the vanity of this proposition, for it is manifest, "as I have showed in former chapters, that notwith- "standing these contracts, the money was continually "from time to time raised"?—Rice Vaughan's article has, I think, merely a literary interest. The state of things, politically and otherwise, is so wholly different now from what it was in 1675, that it is impossible to cite then-existing difficulties as applicable to our present question. He and his contemporaries would have thought the making and maintenance of a postal convention, a copyright convention, an extradition treaty, a zollverein, quite as impossible or fruitless as a treaty against "raising of moneys;" yet all these things have been done, and done successfully, in our own time. But even the contract which he thought it so impossible to maintain would be easier to maintain now, though still most difficult. You have not, I think, rightly apprehended what that contract was, and how totally different it was from that which I propose. Your extract relates not to the question of a fixed ratio between gold or silver at all, but to the fixed standard of the metals which were used as monies, that is to say, that the alloy should be so much or so much, and the weight of the coins so much or so much, not that this or that metal should be used. That is the meaning. It was recognised at that time, and always understood when monies were talked of, that the two precious metals were the monies that they meant, not the particular metal gold, or the particular metal silver, though silver in one country, perhaps, and gold in another, was the metal ordinarily used. Vaughan is speaking of the foreign *coins*, which, as you know, were commonly current in England, and it was obviously important to Englishmen that they should be of the weight and fineness recognised by law; whereas it was notorious that both here and abroad coins were frequently deficient in one or the other or both. "Raising of monies" was causing them to pass for a higher value than their true contents indicated. I have known war made, even in modern states, for this *teterrima causa*. My remark on it is that one could quite well understand that by cupidity and bad faith, which were not infrequent in Governments in those times, an attempt should be made in many cases to over-value their coins, that is to say, to diminish, in the case of such and such a coin, its true weight and fineness; but it does not seem to me to affect the proposal that I have made, that is, that there should be a definite ratio agreed upon by all of the principal commercial nations between gold and silver. What has troubled people in former times has been the badness of coinage rather than the difficulty of an agreed ratio, the coins have been clipped, good coins have been issued, and the bad coins have remained and the good ones have left the country; but none of those evils would happen in the case of an agreement for a certain ratio. I see nothing there that at all militates against what I have said before, viz., first that the other nations would be willing to make such an agreement; secondly, that there would be no inducement to them to break that agreement, the only possible inducement being that of self-interest; and I have shown that self-interest would cause them to keep to it rather than to break it; whereas it is obvious that self-interest, or what they deemed to be self-interest, induced kings in those days to "raise" their coins, and thus put money into their pockets

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They could make their coins what they would, but they cannot make gold other than gold, nor silver other than silver.

5787. Then what have you to say with regard to Professor Stanley Jevons, when he makes the following observations. He says:—"The perpetual maintenance of this supposed convention is the only safeguard against the most serious inconvenience to some of the parties to it. The convention would resemble a chain, the breaking of each link of which would throw an increased strain upon the other links. There exist, indeed, a good many international conventions, relating to postal intercourse, extradition of criminals, copyright, and so forth; but in none of these cases would the breaking or suspension of the convention result in any ruinous consequences. There would be suspension of benefits rather than occasion of evil. But should war break out among some of the countries involved in the monetary convention, the probable effect would be to throw the mass of silver coin upon neutral nations. This might be done without any express breach of the convention, simply by the issue of paper money, a measure which we cannot pretend to consider unlikely, seeing that the chief difficulties of the present monetary situation arise out of efforts for the withdrawal of recent paper money issues"?—This last suggestion as to paper money is perfectly true, and I have met the objection long ago. There is no doubt, in the first place, that anybody could withdraw from the convention; in the second place, that a state of war might make it necessary for one or more, not to withdraw from the convention (there would be no longer for the time any question of convention with such a nation or nations) but to issue paper money as they have done heretofore. Then the question is, what would be the effect on themselves and what would be the effect upon other nations, and in what would the case differ from the present state of things that we now have. The effect upon themselves would be that it would put them for the time, in fact though not in law, clean outside of the convention, as if it had for them never existed. It would do no more harm to themselves then than it would now. The effect upon other nations would be, not as Jevons says, that silver only would be thrown upon other nations, but that whatever coin, gold or silver, or silver and gold, they were using, would be thrown upon the other bimetallic and monometallic nations. What would be the difference between such a state of things, and the same course of action in the present monetary status? If France and Germany went to war and chose to depart from their present system, it might be that they would go to an inconvertible paper currency. The gold that is used in their money would be thrown upon the gold-using nations; if it is a harm to the gold-using nations to have the gold thrown upon them, the result of which would be nothing but an increase in price, that harm would be suffered. The silver would go to silver-using nations if any existed; that is to say, it would go back to Mexico or be thrown upon India; one does not know where it would go; but the gold would go to the gold-using nations and the silver would go to the silver-using nations. I do not see myself that any great harm would happen, but most certainly no greater harm would happen under a bimetallic convention than under a monometallic system, but rather less. So much for that. When Jevons speaks of the strain that would be put upon the others, no doubt there would be a strain if all nations but one retired from a bi-metallic convention, one nation or group of nations; that we know by experience already. We have seen that France and the Latin Union were left alone in their bimetallic condition, in the face of gold and silver-using nations. As I have said before, when I was examined on this subject, I do not think, and very many people in France did not think, that any harm would have been suffered by them; but, at all events, they were afraid of it and they gave it up. But that is the case of one nation left alone. To make Jevons' fear at all germane to the matter, you must have all nations withdrawing but one; because, if France for 70 years, and with a most extraordinary difference in the production of gold and silver, could maintain a bimetallic law, much more than could two nations, and if two nations could do it, very much more could three, and still more could four, in greater proportion.

5788. I believe you have something to say with regard to the disposition of the Netherlands to join a convention?—I knew nothing before about the Netherlands; I knew what was the disposition of the United States; I could form a very good idea of what was the disposition of France, and of the Latin Union, except Switzerland of whose present disposition I know nothing, and of Germany too; but I happened to meet Mr. Pierson the other day, the Governor of the Bank of the Netherlands, and Professor of political economy there (whom I have already quoted), and he tells me that the opinion is very strong in the Netherlands, and very widely spread, in favour of the bimetallic agreement. I saw also, a few days ago, a charter which has been granted to the Bank of Amsterdam by the King, and there the charter reserves to the Government the power of enforcing upon the Bank of Amsterdam the taking of gold and silver at a mint price, if a bimetallic agreement should be entered into, and if such enforcement should be made upon the chief banks of the other nations, parties to the agreement; so that it seems it is not only desired by the people, but in contemplation by the Government of that country.

5789. (*The Chairman.*) You have spoken of the tendency of the depreciation of silver in relation to gold to stimulate production in the silver-using country, as, for example, in the case of wheat from India. Suppose you had a fixed relation between silver and gold, that stimulus would still exist in the case of a wheat-producing country, with a depreciated currency?—With a paper currency you would say.

5790. With a paper currency; I was thinking of Chili?—Certainly it would, and since I spoke of that, I learn that, much to the displeasure of some interests in that country, the Government of Chili has passed a law for the gradual redemption of their paper money and resumption of cash payments, calling in and destroying $100,000 a month from the 1st of January last, till the issue be reduced to $18,000,000. In 1887–88 $1,200,000 will be spent in silver, and $1,500,000 in following years, to be deposited in the mint against legal tender notes. The Act was passed March 14, 1887.

5791. You said in your evidence, in answer to question 3054, with reference to the risk of fluctuation being guarded against by arrangements made by the merchants with an exchange bank, that the arrangement made by the merchant with the banker only transfers the risk; some one must suffer. Well, suppose that the banker could arrange at the same time, or knows that he could arrange at the same time, a reverse transaction; in that case nobody need suffer?—I must again say that I am talking of what I do not personally know. The point arose out of questions relating to India, with which country I have little commerce. In the trade of Chili, which has also a depreciated currency, and with which I am familiar, the same operations would also be possible if the banks there were exchange banks, but as a matter of fact they are not, and the merchants have to bear each his own risk, guarding himself as best he can. In the case supposed by you, if or when it occurs, the banker need not suffer.

5792. Nobody need suffer in that case?—No; that does not follow, because the risk must be there, and must be paid for, in meal or in malt.

5793. But surely, supposing that I know that A has to pay 1,000*l.* in gold in London on a particular day, and has to arrange for that, and B has to receive 1,000*l.* in gold in London on a particular day—the

same day—and has to arrange for that, it does not matter whether gold goes up in relation to silver or goes down in relation to silver, the transaction will be precisely the same. I do not quite see in that case where any risk exists?—The risk to the merchant may be compared to that of the perils of the sea, which you do not annihilate by opening a policy of insurance. The banker makes an arrangement with him and charges him so much for it. At the same time, according to your supposition, the banker makes an arrangement with another merchant, on whom a like risk presses, and frees him, as he freed the other, from the risk of fall or rise in the exchange, taking the two risks upon himself, and exacting a compensatory turn in the exchange from both; and that is how the banker lives. But you think that he has cancelled the risks, and runs none?

5794. The only risk to the bank might possibly be, in that case, the solvency of the person who had agreed to make the bank the future payment?—It would be so in that one case, but the rate may fluctuate every moment.

5795. How, in that case, is there any risk of fluctuation? The same sum has to be received and paid in the same metal on the same day?—Business could not really be done in that way. The bank must be paid for relieving the merchants of their risk.

5796. Yes, but is not the one risk exactly a set-off against the other? Are there not two contrary risks which exactly balance one another?—There are in the case you suppose; but then as between A and the bank, and B and the bank in each case a risk has to be got rid of and paid for; they put that risk upon the shoulders of the bank, and the bank may be willing to take it, but if it does it must certainly be paid.

5797. But do they put any risk upon the shoulders of the bank?—What is to them a risk.

5798. Do they put any risk upon the shoulders of the bank if the risks are equal and opposite?—What to them is a risk, and, except in your supposed case, is also a risk to the bank.

5799. Yes; but then you said that some one must suffer. I cannot quite see how anyone suffers there?—Yes they do, because they have to pay a premium to the bank for taking upon itself what, by your present example, indeed, is no risk to the bank, but which is in any case a risk to the person paying the bank, for which he has compounded.

5800. Your expression was "that is only transferring the risk; someone must suffer." Of course I understand your view, that however small the risk, or even if the risk is nothing, the banker will charge something for being at the trouble of the transaction; but I did not quite see how any risk was transferred if the bank can so arrange as that it has two reverse operations at the same time?—If there were no risk the banker would charge, as you now say, some slight commission for the trouble of the transaction. In point of fact, the bank charges a very considerable sum, because, to each person who has to come to the bank there is a certain but an undefined risk, and the bank either will or will not take that risk and arrange it. But at the moment of its making the arrangement with the first man it has taken his risk on its shoulders, and if exchange goes against it, it makes a real loss. In the meanwhile it may possibly have made an exactly opposite arrangement with another man, but it may not. The exchange may have altered in half an hour, and the transaction may leave a loss in both cases. Sometimes the bank will not take the risk at all from either, as I think I mentioned in one of my answers. When I gave the answer first, I told you, or I told the Commission at the time, what the amount of exchange was that the Indian bank charged; when I spoke of it again a few days afterwards I had to say that at *that* date the bank would not take the risk on any account whatever.

5801. I was not in the least questioning that in many cases there was risk, and the bank would take that risk, and would charge for it; but what I did not quite understand was your view that in all cases, in the case of every transaction, there must be risk. It struck me that there were some cases where there would be no risk?—There are some cases in which, by the good management of the bank or the fortuitous demand and supply on both sides, the bank itself may on balance have incurred no risk, but the merchants A and C have both of them incurred a risk upon their shoulders which they have been able to transfer to the bank. Those two risks, by your hypothesis, have neutralised one another; but that would show no gain to the bank when it came to make up its accounts at the end of the year, for whereas it had often made a loss, and whereas it had often made a gain, that time there would indeed be no direct loss, but there would be no gain. Business, as I said, could not be carried on in that way. An equal transaction such as you imagine, though showing no loss in itself, is a dead loss to the bank. Take the case supposed in Q. 5793. The bank, it is true, pays and receives R. 10,000 and gives and takes a bill for 1,000*l*. Why should it do so? It is there for the very purpose of making gains in such transactions and to take contrary risks, balancing one another would be to stultify itself and starve its business. What really happens is that it takes a risk from the first merchant, and charges such an exchange as it hopes will give it a good profit. Its risk is that the exchange, which varies every hour, may fall away from it, and that future transactions may reduce the other to the blank you suggest, or to a loss. You must bear in mind also that as to the merchant's risks, he may expect to arrange with the bank but may not be able to do so. The exchange may vary while he is thinking about it.

5802. Yes, but if, as a rule, owing to the course of trade between the two countries, the bank can arrange counter transactions, so that there is only a comparatively small balance left over in relation to the total of transactions, the risk undertaken by the bank would be on the whole small?—But the profit gained by the bank is, on the whole, considerable enough for the bank to live by it, and it must, as you say, be commensurate with the risk.

5803. That would depend on the charge they make, and I do not quite see if the risk is small why competition in that as in other things should not make the charge small also?—You see small is a relative term. Whatever it is, it is that which measures the risk, and, as I said before, the banks live by it. If the risk were small, competition would regulate their compensation for it, as it does now. But their compensation is sometimes very large, therefore so must the risk be. I am speaking now of what I do not practically know, because I am not an Indian merchant, nor am I in the sense of residing in South America and doing the business myself as a South American merchant; but from what I hear from my partners it is a really definite and certain risk (though its amount is indefinite and uncertain) which is incurred by the merchant and borne by him. In the case of India there is the same risk which is or may be taken over by the banker, and the profit of the banker exists in the clever management of that branch of his business. The bank receives a rate of exchange from this man and a rate of exchange from that man, on both of which he hopes to make a profit, and by the manipulation of those two customers, whether it is on the one side or on the other, it minimises its own risk; but risk there certainly is, for the exchange is constantly varying, and those exact compensatory transactions which you imagine and which would annul both risk and profit can seldom exist, and then only by accident. My point is that, if there is a risk in a paper-using country where (barring further excessive issues) the exchange depends on the more or less demand for bills, much more must there be a risk in a silver-using country where the exchange is liable to sudden fluctuations caused by the fall or rise in the gold price of the metal.

5804. There is one answer you gave that I should

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like to ask you a question upon. You were speaking, in question 3069, of the stimulus given to the growth of wheat owing to a decrease in the initial cost. You say that "so much has it done so that I may safely "say that if the exchange" rate rises to 36*d.* or 40*d.* no wheat would be grown for export. Now, I do not quite understand why you fix that price?—I asked my partner, Mr. Low, whose paper you have before you—I asked him what sort of rate would make a sufficient alteration to stop the growth of wheat for export, and he said, "I should think 36 or 37 would quite "suffice; I do not think there would be another acre "grown."

5805. That would depend, would it not, upon the condition of things in other wheat-exporting countries, because the theory is that the fall in exchange stimulates the growth of wheat, and at the same time produces a fall in prices in the country to which the wheat is exported?—Yes; but it is not the fall in exchange which has any *direct* effect on the prices on this side. Prices are lowered both by the temporary lessening of the initial cost of production which enables the recipient of the wheat to sell cheaper, and by the increase of production which breaks down the price by competition.

5806. Well, would not the contrary transaction—a rise in the exchange—have a contrary effect and produce a rise in prices, and if there was a rise in prices would it not become profitable to you to export wheat produced at a greater cost?—If there was a rise in prices, the rise in prices would take place because of the non-competition. If India and Chili ceased to send wheat to this country, of course the natural consequence would be that there would be a rise in prices in this country, and a point might be reached when again, notwithstanding the rise in sterling value of the cost of production, it might be profitable to grow wheat there; if, for example, it got up to 60*s.* again.

5807. If the proportion of wheat exported from Chili as compared with the wheat exported from India and elsewhere was large, that would have a tendency, would it not, to bring prices up, and therefore, to make production in Chili profitable, at a cost of production which would not make it profitable before?—You mean, I think, if I understand you, this: if the production of Chili were sufficient to make an important difference to the grower of wheat in England, or to the grower of wheat in other countries, then the price here would so rise that the Chilian would be again able to resume the growth of wheat. Yes, I suppose it would be so. It is therefore extremely difficult to fix a particular exchange that would make a difference.

5808. There is a question I should like to ask you upon your answer to question 3080. The question is this: "Let us consider the case of a silver-using "country which is isolated, and not trading with a "gold-using country at all. There, if the currency "depreciates, the manufacturers are stimulated"?—"Yes." Why is that the case if it is not trading with a gold-using country?—There I am talking the language of other people rather than my own, but I imagine it to be this, that the Indian sending goods to China knows exactly that the value of the silver in China will be to him the same as the value of the silver that he has got in India, it will differ only by the fluctuations of exchange consequent on supply and demand. If he sells for a certain number of grains of silver he will get that silver in his own country, which will buy him the commodities that he desires. If, on the other hand, he has to deal with a gold-using country, there is no fixed relation between the two metals.

5809. Has that answer relation to a silver-using country trading with a silver-using country?—Yes, I mean that.

5810. It speaks of its being isolated; I suppose it meant to refer to its internal trade?—I do not know why the Chairman used the word "isolated"; if he meant to refer to the internal trade of the country, I misunderstood his question. If it had no trade with gold-using countries there would be no stimulus caused by the fall of silver in terms of gold.

5811. Supposing it is a silver-using country trading with a silver-using country, the stimulus given arises from a totally different cause and is of a totally different character from the stimulus you have spoken of to a silver-using country trading with a gold-using country?—Certainly. I should say it is not a stimulus at all; It is a different thing altogether from that that we spoke of just now.

5812. I do not see quite why it is a stimulus at all if it is a silver-using country trading with a silver-using country. Whatever depreciation there is, is a depreciation in both alike?—Yes, it is exactly the same, in both.

5813. Why is there more stimulus than if both of them stood still?—It is exactly the same as England dealing with Australia. You send your goods there and you know you will get so many shillings, that is to say, so many twentieths of a gold piece, and the currency being the same you know what you have got. I have said that I think the word "stimulated" in Q. 3080 was incorrect.

5814. If there is a depreciation it will be in both alike? Why should that give more stimulus than if both had remained without any stimulus at all?—I do not think it does; except as compared with the dealing between countries that have not identity of money. I cannot see myself that it is a stimulus in any other sense than that. They are able to deal with more ease of mind. Their trade is diverted to the silver-using country, because they know what they can do with it, whereas they are afraid of dealing, as I think I have before said, with the country having a different money.

5815. I do not think that is clearly brought out by the answer. I understand you to be speaking of the comparison between a silver-using country dealing with a silver-using country, and dealing with a gold-using country?—Yes.

5816. With reference to that point, that high prices have a tendency to stimulate trade, and low prices to depress it, is not that likely to be very temporary. If high prices stimulate trade, are not they likely to lead very rapidly to over-production, which will cause a reaction?—Certainly they are likely to produce a reaction if trade is stimulated to the point of rash speculation; and therefore it is that I do not speak of high prices as being in themselves a good. All that I have said really comes to this, that a condition of continual falling of prices is depressing to the trader and depressing to trade.

5817. Of course a large business at small profits might be more profitable than a small business at large profits?—Certainly, small profits will do just as much as large.

5818. And low prices may bring into the market so many additional consumers as to make the total trade done larger in volume and as profitable to those engaged in the enterprise?—It might; but there again if you mean altogether low prices it comes to the same thing; it is the falling condition of trade which is hurtful. I speak historically rather than theoretically there; as a matter of fact we know it has been so, we know that a period of falling prices has been usually coincident with short supplies of the measure of value, and with depressed trade.

5819. In questions 3508 and 3509 you are asked: "Is not the distinction really to be found in this "that in the case in which there is a forced currency running side by side with gold, gold is "wanted by those who have to make foreign payments, whereas in a truly bimetallic country it is a "matter of perfect indifference to the inhabitants of "the country, whether they take gold or silver for "their purpose." And your answer is "Yes." Well, that would not be so, would it, unless the country in which the payments have to be made is bimetallic and at the same ratio as the country which has to make them?—Certainly, but that I have fully

gone into afterwards. (Q. 4588.) They must be of the same ratio or else it would seem very greatly to import to the remitter whether he remitted one metal or the other.

5820. I should like to ask you one or two questions about the demand for gold arising from Germany changing her monetary system. Do you take the same view as Mr. Nicholson that the gold which one has to look to in the country that has a gold standard as increasing the volume of the currency is only that which is coined or which goes into bank reserves, and therefore is in the same position as gold actually coined, excluding, I mean, gold that is hoarded or which is used for the purposes of the arts?—I think I have expressed in a former answer that you may consider all those things, the hoarding, the use in the arts, as in some sort a relegation of the gold to the mines, the difference being that the original mine is difficult to be worked; the mine of hoarded money is easy to be worked, and in proportion to the ease in which the gold or silver in hoards or in the arts is attainable, so is that indirectly effective in the question of price, but that I think which really is the main regulator of price is the quantity of gold or silver presently coined or coinable.

5821. Therefore, so far as the gold which was required by Germany and by Italy came out of hoards, that would make no difference with reference to the volume of the currency?—I should think not.

5822. So far as it was diverted from use for the purposes of the arts also, it would make no difference?—In perhaps a differing degree it would be so. There has been, I think, as matter of fact, no such diversion; one can see no evidence of it.

5833. Then, if after Germany had supplied itself with gold, the total currency of the world, whether in gold or silver, was as great as before, you would not expect that to produce any effect upon prices, would you?—Yes, I should, in gold-using countries; because the price is the relation of the mass of gold to the mass of commodities measured by the gold.

5824. Not as to the gold, because Germany and France were still using silver; therefore, I say if the total volume of gold, plus silver, that was either in the form of coinage or in the form of gold or silver in the bank reserves, was as great as before, you would not expect any change in prices, although the distribution of the gold and silver amongst the civilised countries might be different to what it was before?—If the only change that took place was that Germany and Italy used gold, whereas it had theretofore used silver, and the gold, though taken away from its occupation in other countries, was replaced by silver which was to do the work which the gold did there before, there would be, I suppose, no change in prices on that account; but in point of fact that was not so, because, in the first place, Italy—that was not a very great quantity, but in Italy it replaced paper. It was the converse of that which Mr. Birch asked me about just now, that is to say, a nation that should leave off the use of the metallic currency and take to paper, whereas this left off the use of paper or diminished the use of paper and took to a gold currency. Then again, silver did not take the place in the other countries of that quantity of gold that had been taken away from them. Silver, to the extent that I mentioned in an answer to one of Mr. Birch's questions before, lies unused in many parts. The mints of Germany and France are now closed to silver, which, if opened again, would put more into the category of coin or coinable metal.

5825. But did not a large quantity of the gold go from France to Germany, in 1873, at the time of the demonetization of silver by Germany?—At the time of the demonetization, yes.

5826. And in France was not that, to a considerable extent, replaced by silver?—I take it, it must have been so. I have not before me the figures of the replacement, but I think it must have been. As to the movement of the gold, in part it was a movement direct of gold, but a great deal of it was done by bills, of course, and by claims of France upon other countries which they had to satisfy to Germany by delegation from France.

5827. Of course that would make no difference in the volume of the currency?—That would make no difference at all, but so far as it was the actual movement of gold, that must have caused a contraction of the currency in France, and that contraction of the currency would doubtless have been filled up by silver coming in, so long as the mint was open.

5828. And so far as it was filled up by silver coming in it would make no difference?—Not at that time. France would feel the contraction of the gold measure as much as we should, except so far as silver would supply its place. When the mint was closed to silver the gold would alone bear whatever fluctuation might happen. But at first it would make no difference to France.

5829. Or to the total currency of the world?—Not so far as silver was used. Silver was used in France instead of being used in Germany, that was all. So far as it went, a great deal was still used in Germany, but so far as it was a mere exchange of the yellow metal for the white metal, of course it made no difference.

5830. But where did the gold go from to Germany?—A great deal of it was taken out of our vaults here, but that must only have been because England owed it in some way or other. It caused a great multitude of fluctuations of the rate of discount of the Bank of England, of which I spoke last time.

5831. Is there any reason to suppose that our currency, including in that the coinage and the reserves, is less than it was?—It is very difficult to answer, but it is said that it is; that is to say, it is said that there is less gold in this country than there was; as to the gold in the Bank of England, one knows perfectly well how *that* is. I think in 1876 there was 30,000,000*l.* odd of gold; now there are 23,000,000*l.*; but the slackness of trade has no doubt diminished the necessity for the use of the metal; that is, they have reacted upon one another.

5832. I was rather looking upon the effect in and subsequent to 1873, to see if one could ascertain whether the total currency of the world had become diminished, or whether the distribution of the different precious metals had really been altered?—I think, taking into account the increase of population, and the increase of commodities, which, after all, fills the other scale, that the active money metal of the world has been diminished. Silver, as I said in former answers, lies unused, but it is very unlikely that the silver portion of the world's currency should have diminished. I do not see how it touches the matter before us to ascertain whether both the measures of value in the world have lessened in quantity. My contention is that gold is lessened in quantity for the work it has to do, and that, as gold is alone our money, *that* is what touches us nearly.

5833. (*Sir T. Farrer.*) But the quantity visible in the reserves of the banks of the world has, on the whole, largely increased?—No, I gave you the figures. It was 30,000,000*l.* odd in gold, in my time, when I was Governor of the Bank of England; it is now 23,000,000*l.*

5834. (*Mr. Birch.*) I think the gold in the Bank of England has not increased?—No, not at all.

5835. If you take the Bank of France, the gold in the Bank of France in 1873 was 27,000,000*l.* sterling; it is now 52,000,000*l.* sterling?—Yes, but you must remember that the Bank of France was not everything in France, as much as it now is. I wish to explain how that is, so far as I know. I am not so well acquainted with those matters, but I am told that the Bank of France has very much more in the last decade gathered to itself the gold of the country; and the other banks in France, owing to the use of cheques and so forth, do not keep the same amount of gold. I do not give that at all of my own knowledge.

5836. In silver she held, in 1873, 6,000,000*l.*; she now holds 45,000,000*l.*?—Yes.

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5837. And the whole of that is issued; it is represented by paper; it circulates exactly the same?—Yes, that is what I argued; it is absolutely in use, that is, and had been in great measure I am told withdrawn from the provinces.

5838. But surely you are aware that there is any amount of silver now in France?—No doubt there is, if you say so, but that is in people's pockets; but what I mean is that in banks and in the tills of merchants and in the tills of traders, I am told that there is not nearly the same store of gold and silver as there used to be.

5839. (*Mr. Barbour.*) You think the tendency of the modern system has been to accumulate money in the banks; consequently you may see more in the banks, but it does not follow that there is more in the country?—In the chief banks the tendency, I think, has been to accumulate.

5840. And I think there has been a tendency to use notes more largely?—Abroad, certainly.

5841. And, I suppose, that would be a reason for more gold appearing in the banks?—As Mr. Birch says, the silver is represented by notes, which may be said to be actually the specie current in the form of paper.

5842. (*Mr. Birch.*) You were talking about notes just now. Supposing that France and the Latin Union came to some arrangement for the issue of notes, internationally between those countries, would you advocate our entering into the union?—Certainly not, unless based upon the precious metals; and I do not see my way to any international arrangement for so basing them. In any case I am not at all inclined to enter into any arrangement for an inconvertible currency, such as that indicated.

5842*a*. Not even if there were a complete accord of nations?—Inconvertible currency would obviously not be affected by any possible accord of nations; it is a wholly different matter, because, if you have an inconvertible currency, unless you have an absolute accord between all nations whatever, and with everybody to whom you may have to remit, you would not at all regulate the value of the metal which you would have to remit to such a country as was excluded. It would not help you in the matter of remitting to China.

5843. But supposing you had accord as far as Europe is concerned; and, say, that a note of the Bank of France, for instance, was equivalent here to so many pounds sterling, and a note for so many pounds sterling was equivalent to a note for so many francs in France, they might be interchangeable on a basis if you secured the accord of nations?—You mean upon specie, do you not?

5844. I mean a pound sterling in paper should be recognised for so many francs in France, and a note of the Bank of France should be worth so many pounds in English notes here?—But it must be either convertible or inconvertible.

5845. Well, inconvertible, or whatever you like to call it, a certain arrangement has been made by each country, and those notes are circulated freely in each country?—My answer is, that if they were to be inconvertible notes it would be absolutely impracticable, and bad policy if practicable.

5846. Naturally notes would be a much more convenient mode of discharging international obligations than specie, and it is conceivable that France, Germany, and other great nations of Europe might combine to say that in each country their notes should be reciprocally current at such and such a ratio. Would you advocate that England should enter into such a combination for the general benefit?—What I desire is an agreement between nations that the metals which are recognised in all the civilised countries of the world as money, should be used as money in those agreeing nations. There can be no question of *ratio* between inconvertible notes nor between two promises to pay the same thing. The idea of ratio is lost, though it is conceivable that a nominal par of exchange should be established even between inconvertible notes issued by two countries. But if behind your question there is the meaning which your use of the word ratio implies, that the contracting countries should mutually recognise the two metals, at a fixed ratio, as the basis for their interchangeable notes, then the plan would have its advantages; but the world is not ripe for it, and, I doubt, never will be. It would be an international development of Ricardo's plan of deposit of bullion on which notes should be issued. But international confidence is not sufficiently developed to allow of notes issued on deposits in a foreign country becoming legal tender in neighbouring nations. Imagine German and French notes legal tender in England, and a war breaking out between those nations. I fear there might be a possibility of either nation, under stress of war, laying, at least temporarily, hands on the specie.

5847. (*Sir T. Farrer.*) I think you said in one of your former answers that the present state of things makes it dangerous for gold-using nations to speculate in silver-using countries. You have, I think, some particular instances that you wish to mention?—Yes; I stated before that, as a general rule, it was dangerous to attempt industrial enterprises in silver-using countries (except on a gold contract), but I had no particular instance to give you. Now I will mention that the Mexican Railway report is just published, and the loss on the difference between the price of silver as it was computed—it is only a computed price like that of the 2*s*. to the rupee; it is 4*s*. to the dollar—the loss is something between 90,000*l*. and 100,000*l*., that is, more than 46,000*l*. for the last half-year.

5848. The loss to whom?—The loss to the enterprisers; to those people who sent their money there to make the railway.

5849. The loss to English shareholders?—The loss to English shareholders.

5850. Who have to be paid in gold?—Of course they are paid in gold, when they are paid anything at all.

5851. But the earnings are in silver, and it is the turning of that silver into gold that causes their loss?—The silver is remitted hither and sold, and that is the loss.

5852. (*The Chairman.*) If the depreciation of silver has stimulated production there, may not that more than have compensated the railway company for the loss in exchange?—No, I think not; very far from it. Of course it would have some effect, and that effect is now beginning to be felt. The downward traffic of that railway, that is to say, the traffic in the goods produced in the country, is very much larger, but not as yet for export in any quantity. Very little wheat has been exported. Some sugar has been exported, and some other commodities; but the shareholders have had no compensation hitherto; the compensation may be in the happy future.

5853. But what I do not quite understand is this; if production is stimulated, then more, probably, is carried by the railway?—It is so; it is beginning in this year.

5854. You mean that it has not gone on to an extent sufficient to neutralise the fall?—It has only just begun this year, and there is no hope whatever that the stimulus can act so strongly and so long as to make the freight on the additional produce, whatever it may be that is attributable to this cause, anything more than a crumb against the whole loaf lost in exchange. The total increase in the freights of local produce carried by the railway in the last half year has been 10,900*l*. gross, say 5,000*l*. net, of which increase by far the greater part is due to the now settled condition of Mexico. What is that to a net loss of upwards of 46,000*l*.?

5855. Have silver prices risen in Mexico?—Not much; much the same as in India.

5856. (*Sir T. Farrer.*) But if gold is appreciated in this country the gold that is received here by the shareholders is worth more than it was?—Yes; to the extent that the gold that is received is worth

more, it is to the good of the recipients, but it is a very trifling benefit, and is nothing appreciable in comparison to a loss of 90,000*l.* or 100,000*l.* a year. Of course it is a very small compensation, a compensation that none of them perceive.

5857. Then you mean that the gold prices of the things that they buy in this country, compared with what they receive, have not fallen in proportion at all to the fall of the gold price of silver?—Certainly not; they may have fallen, but fallen from other causes, which causes would have benefited the shareholders all the more if their earnings had not been so mulcted by the fall of silver. That which would have been for their good, whether silver had fallen or no, cannot be counted as a compensation for the fall; but they have not fallen in that degree.

5858. That would depend very much upon what sort of things these particular people want to buy?—Oh, yes, but they are the ordinary things; they want to buy what everybody else does; they want food, and coals, and coats, and horses, and chariots, and other things. I am sure your own experience will not tell you that you buy all these things retail at very much less than you used to do.

5859. But the general statement of those who complain of the appreciation of gold has been that the prices of goods, and the price of silver, have fallen pretty well together?—Wholesale things?

5860. Wholesale?—Yes, they have fallen together; it may be because silver is a commodity like others, and silver has been affected in the way that others have been affected. It is impossible to say that one commodity shall have fallen exactly in the same way as any other, because there are many circumstances that affect the several commodities in different ways.

5861. Then, if the people who ought to have received this gold have not received what in commodities was of as much value as it ought to have been, it would have been for one of two reasons, either because the particular things which they wanted to buy have not fallen as much as silver has fallen, or because the profit has remained with the retailer by the way?—Some of it. But there is yet another very important thing. You must consider that whereas you speak of the gold which these people have received as having purchased more commodities than it did before, the fact is that some of them got none at all. The ordinary shareholders are all left without anything at all; it has gone to the debenture holders and to some of the preference. It is very little consolation to a shareholder who has received not a penny of dividends, to persuade himself that the sovereigns received by his creditors have a little more purchasing power than they had. It is a very common story now-a-days; the mortgagee devours the rents of the estate.

5862. I should like to ask you one general question. You were a member of the Commission on the Depression of Trade?—Yes.

5863. And that Commission came to the conclusion which I think is a conclusion come to by all the economists in all countries that have written upon the subject, that a good deal of the complaints we hear from traders and manufacturers arises from the fact that wages have taken a larger share of the whole production of industry than they did in former times?—Yes, but I should put it in rather a different way, a way which accords with all that I have said here, and which, I think, we found pretty well established before the Commission, that the wages are now taking a greater per-centage of the profits than they were before, because the fall in prices has not reached wages; has not reached individual wages.

5864. But are not the opinions of all the greatest economists and, I think, the evidence that was taken before your Commission, to the effect that long before the fall of prices began there was a process under which the wage earner obtained a larger share of the whole produce of industry than he did before?—Yes, he did; the pendulum was swinging that way.

5865. And that progress has been accelerated by the fall in prices?—I do not see how.

5866. Because wages have not fallen as fast as prices?—Yes; that is, the increase of the per-centage of their wages on their employers' profits has been increased by the fall in prices, because the other end of the scale has been touched, by the lessening of the profits; but that has neither accelerated nor positively increased the rise of the wages of the people.

5867. But, on the whole, independently of the fall of prices, one of the most striking phenomena in the progress of industry during the last 50 years has been that the wage earner has obtained a larger share of the products of industry and the capitalist less?—The pendulum has swung up in this way, but the counter swing is now in progress.

5868. Perhaps; but is there not apparent a secular progress independently of the rise and fall in prices. Does it not seem as if the wage earner was constantly receiving a larger and larger share of the products of industry?—Yes; and this was the cause, as I think I drew out from a witness at the Trade Commission. The conscience of the people was awakened in that respect; the wage earner was in evil case, and it became a necessity, not having anything to do with the fall or rise of prices, but owing to the greater knowledge of the condition of the labourer, produced by the greater practical nearness of the great towns arising from the existence of railroads, all men had the opportunity of ascertaining what was happening, and it thus became necessary to alter and improve the condition of the labourer. But this does not date from 1873, but from long before, as you say.

5869. And that is a secular change which has been taking place all over the civilised world, has it not? I do not know whether you have consulted M. Leroy Beaulieu's and M. Chevallier's works in France, Mr. Atkinson's "Distribution of Products" in America, and Mr. Giffen's and Professor Leone Levi's essays in this country. They all agree in this that there has been a secular change going on by reason of which the wage earner has been receiving a larger and a larger share of the whole products of industry?—Yes.

5870. I was going to ask you whether you do not think that some of the complaints that we have had about depression arise from the fact that the capitalist does not receive under that secular change as large a share of the products as he formerly did?—I think it is certainly the case that the labourer received higher wages, but as you have justly said, that secular change began long ago, and cannot have had much to do with the complaints of the capitalist, who was himself also doing very well while the condition of the labourers was improving, but who in the last 10 or 12 years has found the new causes of complaint on which I have been insisting, and the consequence of this is that there is less disposition to put capital into industrial undertakings, and that consequently it will be so much the worse for the wage earner.

5871. The change may go too far?—Of course it will be much the worse for the wage earner when it comes to that.

5872. (*Mr. Chaplin.*) I just want to ask one question about the price of wheat. Assuming the Indian exporter to get 2*l.* a quarter, or something like that for his wheat, before the price of silver had fallen, how many rupees could he get at that time for his 2*l.*?—He could get some 20 rupees. I am not so familiar with the exchange as to do that sum immediately, but he would get them at the rate of 1*s.* 10½*d.*, or something more perhaps.

5873. In round numbers nearly 2*s.*?—You may call it 2*s.* for the purpose of calculation.

5874. He would get 20 rupees in round numbers?—You may call it so. It would be really 21⅓, at 1*s.* 10½*d.*

5875. Now to-day he sells his quarter of wheat for 30*s.*; how many rupees will he get for that 30*s.*

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now, assuming that the rupee is now worth 1*s.* 4½*d.*?—He gets about 22 rupees; more accurately, 21·81.

5876. He would get about 22 rupees to-day?—Yes, and before the fall of silver he got half a rupee more.

5877. So that as matter of fact it comes to this, that while the price of wheat in England has fallen to 30*s.* a quarter, and the English producer has to accept that lower price, the Indian producer is actually getting, owing to the rate of exchange, more for his wheat than he did before?—Yes.

5878. The substance is the same, that the man gets more?—The Indian producer gets more, but not, perhaps, quite so much more as you put it in your calculation.

5879. But assuming that the calculation had been made exactly correct as regards the figures, the fact remains that although the price of wheat has fallen very considerably since the price of silver fell, the Indian producer also gets more now for his wheat than he did before?—Yes; and you may add that the Indian producer having got more, he gets exactly the same amount of commodities for each rupee, so that it is an absolute profit to him.

5880. (*The Chairman.*) There is only one other question I have to put. You have given us your evidence, being one of the directors of the Bank of England; are the Commission to understand that you represent in any respect the views of the Bank of England. I mean in this sense that you represent the preponderating views amongst the directors?—No, certainly not. I think I am in a small minority; but it will be no new experience if the advocates of a sound and healthy policy have a long road to travel before they convert the minority in which they find themselves into a majority.

The witness withdrew.

Mr. S. Smith, M.P.

Mr. Samuel Smith, M.P., recalled and examined.

5881. (*Sir T. Farrer.*) You have no special evidence, have you, of the actual fact of a general fall in prices, except that contained in *The Economist* list and other similar lists?—No evidence. I have a general knowledge which all men of business have of the very great fall of the articles with which they are connected. I also know from my own personal knowledge of the heavy fall in the prices of land and houses, ships, factories, and indeed every form of property in this country.

5882. Have you any knowledge of the state of things in other gold using countries?—Not intimately.

5883. In America, for instance. You stated that there had been a great progress in America which there had not been in this country?—There has been a very considerable revival of trade in America in the last year or two.

5884. (*The Chairman.*) As to the fall in the price of ships, there has been an enormous increase in the tonnage of existing shipping between 1873 and 1885, has there not?—Yes.

5885. Then with the depreciation do you think that the shipping now is of greater or of less value than the shipping in 1873?—It would be difficult to give an exact answer to the question, but a friend of mine, who is largely acquainted with shipping, estimates the depreciation in the value of shipping in this country at 50,000,000*l.* sterling.

5886. Calculated on what basis?—Well, I presume from the the value of, say, a few years ago. Will you permit me to give you one or two facts within my own knowledge. Take Liverpool as the chief centre of the shipowning industry in England. The chief lines of steamers in Liverpool ply between Europe and America; the chief of these lines is the Cunard Company. The Cunard Company was taken over a few years ago from a private concern, and the shares were issued at 10*l.* The 10*l.* paid up shares are now selling at 3*l.* 10*s.* Take another instance. The Inman Company was a very prosperous line at one time; it sunk lower and lower, till at last it was broken up as a bankrupt concern last year, and the whole capital, amounting to 900,000*l.*, was found to be lost, and the borrowed money, mortgages, &c. had to be paid off at the rate, I think, of 7*s.* 6*d.* in the 1*l.* Take another line of steamers with which I am acquainted, the National Line. The shares, within my knowledge, stood, at one time, at 15*l.*, they were 10*l.* paid up. At the present time, if I am rightly informed, they can be bought for 2*l.* each. That is a sample of a large portion of the shipping property of Liverpool.

5887. Can you tell me what were the respective numbers of vessels trading between this country and America in 1873 as compared with 1885?—No, I could not, of course, offhand give you those figures. They can be got.

5888. But there has been a very large increase?—A very large increase.

5889. And if you have a very large increase in the number of vessels seeking employment without a corresponding increase in the amount of trade going, necessarily the value of shipping must fall, must it not?—Of course we are quite familiar with that fact, but we had a rapid and steady increase in the number of ships owned in this country from 1850 up to 1873 without this corresponding depreciation.

5890. (*Sir T. Farrer.*) And long after 1873, was it not; it culminated about 1880 or 1881, I think?—Yes, it culminated then.

5891. And there was nothing, perhaps, in the country in which there had been so great an increase or so great an expansion?—I would partly agree with that.

5892. It went on after other industries had begun to flag, did it not?—I will, undoubtedly, own that over-building and over-stocking of the market went on, but that does not adequately account for the enormous and excessive depreciation.

5893. And there is probably no property in the country which requires such a constant addition and such a constant watching, and such a constant expenditure of money upon it to keep up its value; is not that the case?—Quite.

5894. And a ship which is first-rate to-day, may, by reason of some improvement, fall into the second rank to-morrow, and become of comparatively little value?—Quite.

5895. Well, all those circumstances tend to very great fluctuations in the value of shipping, do they not?—I have been acquainted myself with five or six periods of depression in shipping, and I should think none of these lasted more than two or three years. None of them have been at all equal to the present depression in virulence or the length of time which it has lasted; in fact, shipping has passed through the same process as every other trade in the kingdom. The recent depression in all of the trades has been much more acute and much more long continued than any other period of depression that I can remember.

5896. (*Mr. Birch.*) I want to ask you one question on that point. Previous to that period you had not the enormous competition that you have now from Germany, particularly in the trade to New York. There are now three or four German companies started which are running in competition with ours at lower freights?—Probably there is more competition, but on the other hand, we have had less competition with America. In my earlier years there was great competition with the United States, and a large part of the American trade was done by American vessels in competition with the English.

5897. (*Sir T. Farrer.*) Then I will go back to what I was asking you before. You say that you know that most kinds of property in this country, or

a great number of kinds of property in this country, have fallen in value, and you say that you do not know so intimately what is the state of things in America?—No.

5898. Did you say there has been a revival in America; and that there is progress in America which there is not in this country?—Yes.

5899. Well, America is a gold-using country, is it not?—Except for the 4,000,000*l.* sterling of silver which they coin every year under the Bland Bill.

5900. And therefore, if scarcity of gold or depression of gold prices were the cause of the general depression in trade, you ought, so far as that cause is concerned, to find it in America as well as in this country?—Well, the reply that I would give to that is that America being a large, progressive, new country, has many elements of progress which an old country like ours has not got, and it would be a foolish thing to attribute all changes of trade in America purely to currency. I should never do anything of the kind, but I would say that if you take the period in America from 1873 onwards till now, they have had a much larger period of depression during that time than they have had in any previous period in America.

5901. And do you attribute that to the state of the currency?—I attribute that largely to the very heavy fall in prices that took place after the civil war, and to the resumption of specie payments which, for several years, brought about great suffering in America during the period when prices were falling.

5902. Was there not a tremendous inflation and time of speculation in America subsequently to the civil war?—Certainly.

5903. Probably greater than any that has taken place in this country?—Probably. One reason was, as you know, that the dollar was depreciated at one time so much that it took 250 paper dollars to buy 100 gold dollars.

5904. There were a great many causes which it is not worth while going into, but there was a period of very great speculation in America, and a very severe relapse?—Certainly.

5905. And since then there has been a very considerable recovery?—Since then there has been a very considerable recovery, especially the last few years, but I would never venture to say; indeed it would be a very foolish thing to say that the sole causes of all movements in the trade of a country are currency causes; that the sole causes of prosperity and depression are connected with the currency. He would be an extremely ignorant man who would make such an assertion as that, but what I do say is that a contraction of the currency, or an appreciation of the currency spread over a long period of years, and causing a long continued fall in prices, as has been the case in Great Britain since 1873, is very disastrous to a country, and causes great suffering to nearly all classes in the country. I say nothing more than that.

5906. If we are to look for evidence of what is called appreciation of gold, that is to say, to a fall in prices due to a scarcity in gold, we ought to look beyond this country, ought we not? I am now speaking without reference to the question of depression. I am speaking only of the evidence of the fact that prices have fallen in consequence of a scarcity of gold. If that is so we ought to find that, ought we not, in all gold-using countries?—Yes, I think so, and I think in all gold-using countries, as far as I know, there has been a great fall of prices.

5907. Do you know whether there has been a great fall in prices in America?—Yes, I do.

5908. But I mean one that has not been recovered from?—Yes, prices in America are much lower now than they were 10 or 15 years ago.

5909. Are wages lower now in America than they were?—I could not answer that question.

5910. Because such evidence as is open to us in the commercial newspapers shows that they are quite as high as they ever were, and the people are as well employed?—Yes, the people are well employed just now, and the rate of wages is good, but the price of cotton, with which I am more immediately connected, has been very low in America for the last three years. The price of corn we all know has been so low that the cultivators have been hardly able to go on growing wheat.

5911. Do you know anything at all about the price of land in America?—I am not able to answer that question.

5912. Probably if you took the period since 1873 the price of land has very largely increased, has it not?—Well, the great increase of population always raises the price of land, especially in the neighbourhood of cities.

5913. What I wanted to get at was that the evidence drawn from *The Economist's* figures, on which so much reliance has been placed, is rather an imperfect induction to rely upon with reference to a general fall of gold prices?—I think they are perfectly correct. As far as England is concerned, they correspond with my own experience.

5914. (*Mr. Birch.*) What proof have you of the contraction of the currency to which you have referred on several occasions; what evidence is there of a contraction of the currency?—That is a very large question, and it would require a speech to answer it.

5915. Can you give me any indication?—Well, I would have to go over the ground of most of my previous examination, but I am quite willing to do so if you wish it. You will not see in England any scarcity of currency. I explained that already by stating that wherever you have small supplies, very small supplies of money coming into existence for several years, prices fall and adapt themselves to the smaller supplies, so that there remains as much currency to transact the business of the country at the lower range of prices as there was at the higher range of prices. The two things adapt themselves mutually. But as to the actual fact of the amount of money available for currency, I would make this reply: during the prosperous period of trade which lasted from 1850 to 1873, we had coming into existence every year an average of 25,000,000*l.* of gold and 10,000,000*l.* or 15,000,000*l.* of silver, practically about 40,000,000*l.* a year of the two metals, which was all available for currency in some part or another of the world, because the mints of many of the countries in Europe were then open to coin silver as well as gold, so that virtually there was 40,000,000*l.* a year of new money, as it were, pouring into the world, and being rapidly converted into coin, subject, of course, to a deduction for what was used in the arts. Well, since 1873 that volume has been greatly restricted; the gold supplies have fallen off. They have only averaged about 20,000,000*l.* a year. Silver has been demonetized, or at all events is no longer coined as money throughout Europe, and out of that 20,000,000*l.* a year of gold, one-half at least is consumed in the arts, and disappears altogether from use as money, and of the other 10,000,000*l.* that remains, India takes 4,000,000*l.* upon the average, reducing the total amount available for Europe, America, and the Colonies to 6,000,000*l.* a year. That is altogether too little. And during that same period several countries that were previously upon inconvertible paper have been filled up with coin which has been drawn out of the stocks existing in the other countries of the world. These various causes have really very much reduced the amount of available currency since 1873.

5916. I mean in this country; in England you do not know any scarcity of currency?—No, I would not say that it is visible.

5917. (*Mr. Chaplin.*) In reference to the price of land in America, you have no knowledge, I understand, of your own, that there has been any increase in the price?—My impression would be that in Manitoba and the wheat-growing countries generally, there has been a reduction in the value of land, because wheat can scarcely be grown at a profit; it can scarcely be grown so as to cover cost at present prices.

Mr. S. Smith, M.P.

23 May 1887.

5918. You have given us some instances of the great fall in the value of shipping property. Can you give us any instances of the depreciation of any other kinds of property that you are acquainted with?—Certainly, I can give several. If you will allow me, I would be very glad to give you two or three samples of this immense depreciation I have spoken about. I will give you one in Manchester, the sale of a large concern that took place in Manchester a few months ago. The firm was R. Smethurst and Company, of Chorley. a very large spinning and manufacturing concern, The head of this firm was high sheriff of the county a few years ago, and greatly respected. Their property was valued by a professional valuer some 10 or 12 years ago as worth 144,000*l.* About six or seven years ago, after Richard Smethurst died, his capital became a claim on the concern, and the firm, consisting of his brothers, became insolvent, and met their creditors in May 1885. A valuation was then made, and placed before their creditors, with a view of making a composition. That valuation was 74,000*l.* They paid a composition of 7*s.* 6*d.* in the pound. They spent on new machinery during the last seven years 13,000*l.* The entire plant, in complete working order, was sold in December last for 28,000*l.*

5919. (*The Chairman.*) But are you aware that in recent years there have been great changes in the character of the machinery used in the cotton trade which has been the cause of great economy in manufacture?—Perfectly.

5920. And are not the mills that were used for the former character of machinery unfit to be used for the new machinery without such alteration as would make it almost necessary to rebuild them?—That I am perfectly familiar with, because I am interested in two concerns myself, and we have laid out an immense deal of money in the last 10 years in rebuilding and changing the machinery; but we have suffered great depreciation of our property, notwithstanding this outlay.

5921. But that might account for a very great depreciation in such a case as you have called attention to?—It would not adequately account for it. I will give you two or three other instances of depreciation of various kinds of property in Manchester. I will repeat that the first one I quoted was a fall from 144,000*l.* to 28,000*l.*

5922. What was the valuation of 28,000*l.* made for?—It was actually sold at that a few months ago.

5923. Yes, but you could, perhaps, hardly compare the price at which it was sold with the valuation as resting upon the same basis?—I presume the valuation was considered a fair one at the time. Here are some actual sales of property in Manchester. Central Buildings, Manchester, cost 41,000*l.*, mortgaged for 27,000*l.* seven years ago, sold the other day at 25,000*l.* Here is another case, 27,500*l.* cost, sold 18,000*l.* Here is another case, a large dwelling-house cost 11,000*l.*, just sold for 2,050*l.*; another dwelling-house cost 9,000*l.*, offered for 1,900*l.*, and no buyer. These are a few samples of Manchester property.

5924. Were those dwelling-houses in Manchester?—In the neighbourhood; and my experience of Liverpool property is much to the same effect.

5925. (*Mr. Chaplin.*) And do you say that is to be taken as a fair specimen of the fall of Manchester property generally?—I should hardly think those dwelling-houses are, but the Central Buildings show the general fall.

5926. (*The Chairman.*) The fall in the price of dwelling houses might depend on change of fashion?—Only partly; that only partly explains it.

5927. I do not know if you are aware that there has been a change in the value of property in Manchester arising from a change in the habits of the industrial classes, in this, that they now live largely out of Manchester and come in by railway to their daily work?—No, I do not know that I could speak from experience there. If you will allow me I will give you one other instance. A large Lancashire cotton spinner died some years ago, leaving property in mills in one of the best manufacturing districts in the county, going well, and valued at his death at 200,000*l.* The property was left to his two sons, who continued to manage it after, as they had before, his death. It was charged with 80,000*l.* at interest to a married daughter and 1,000*l.* per annum to the widow of the deceased. At the present time, so greatly has the value fallen and so onerous are these charges upon it, that the two brothers are now contemplating resigning the property to the daughter and widow altogether, as the charges represent more than its value to-day. I quote that as typical of a vast amount of Lancashire property. It is a very common thing to burden a property with annuities and jointures for the benefit of widows and daughters, and within my knowledge there are many cases where the sons who inherited the property subject to a certain amount of charges, have found at last that they were bankrupt, and they have had to give up the property altogether for the benefit of those who had received jointures upon it, the depreciation has been so great. During the last few years the number of concerns that have paid well are a mere bagatelle; the great bulk of the trade has been labouring under intense depression, and at the present moment there is hardly a single mill in Oldham that is paying. It is in Oldham that these mills are that you referred to; it is there that these improvements have been carried out to a large extent. I went over carefully a share list of the Oldham Joint Stock Mills about six months ago and analysed it, and I came to the conclusion that if the entire property were put up to sale by auction it would not have left, taken all round, a single sixpence to the shareholders. The whole of the capital was virtually lost, and the property would not have been sufficient to cover the charges upon it.

5928. (*Mr. Chaplin.*) What, all the manufacturing property in Oldham?—I went over a share list during the great depression last year, and that was the conclusion I came to, and I believe most competent valuers would have arrived at the same conclusion.

5929. And even in the case of the new mills there is this great loss too?—I am taking the property as a whole, "lock, stock, and barrel." The mills varied amongst themselves; some there were, very few, whose shares were still standing near par, but the bulk of them were standing at a heavy depreciation, and, what is still more important, the mills were all grossly over-valued. The capital had not been depreciated at the rate at which it was necessary to depreciate it, and if they had been sold off at the market value of the day they would not have paid off the mortgagees and the loan holders. There would not have been anything left to the shareholders, taking them all round as a body. That was the conclusion I came to in examining the list in August of last year.

5930. (*The Chairman.*) That was setting good ones against bad ones, and bad ones against good ones?—I am taking them as a whole, and they are the best mills in Lancashire, the bulk of them being new mills, or nearly new mills.

5931. (*Mr. Chaplin.*) Have you any other instances that you want to give to the Commission?—Well, these are sufficient, I think, for the manufacturing districts. With regard to the agricultural districts, I stated already that I have an admirable statement prepared by Mr. Squarey, one of the largest land agents, drawn from his experience over a great part of England.

5932. Do you consider that the great fall of prices which you speak of, and the distress that you believe it has led to, has had any tendency to increase socialistic feelings?—I think very decidedly. I think in England, as in all countries where you have had several years of falling prices and great depression, there has been a serious outgrowth of socialism and discontent in connexion with it, and I should like to put in evidence before this Commission a letter I have from a gentleman who has devoted

much attention to working class questions, namely, Professor Foxwell.

5933. Do you think that the present state of things is giving rise to any feeling or desire for a return to protection?—I think there is not the slightest doubt in the world that the heavy fall in prices in the last 10 years has given a great stimulus to protectionist policy all over Europe and America, and is producing a very strong current of opinion in England in the same direction.

5934. Among whom do you mean, among the working classes or the capitalists?—Amongst the industrial classes, I should say, generally. The agricultural classes in France and Italy and Germany have all demanded and got protection; and the duties have been largely increased this present year; and we find that our colonies are moving more and more in the same direction; and it is only to-day that I was applied to by a deputation about a rise of the Canadian duties in iron amounting to 150 per cent., which has just been decided upon in Canada, and which will destroy altogether our trade with Canada in iron unless it can be averted.

5935. That is an increase in the iron duties that you speak of, is it not?—150 per cent. in Canada on the duties already existing.

5936. When you speak of the industrial classes do you mean us to understand that from your own experience the desire for protection in consequence of the present state of things is spreading among the manufacturing artisans?—I think widely. I found it very strong in Liverpool the last few years. They cry out against cheap goods coming into this country and competing with our manufactures, when they are in such a very depressed state themselves.

5937. (*Sir T. Farrer.*) Does their desire go to the extent of protection to corn?—It applies more, I think, to protection against foreign manufactured goods; those countries are doing as much as they can to shut out our goods, and they think it is very unfair to take their goods in return free of duty; but I think it also applies in agricultural districts also, as we all know.

5938. (*Mr. Chaplin.*) But as far as you can gauge the feeling that you speak of among the working classes, is their desire for protection so great that they would assent to it even if it included a duty upon corn?—I could not answer that question. I do not think the movement has gained such strength yet as to carry the country; all I say is that the long continued depression has very powerfully shaken the confidence of many classes in this country in the efficacy of free trade.

5939. But I gather that what you mean is this, that though the artisans may to a great extent desire to have a duty imposed upon manufactures, that if it came to placing a duty on corn they would hold a somewhat opposite opinion?—I think that is very probable.

5940. I mean if the duty on corn were to be the price of obtaining a duty on manufactures, then they would object to it?—Probably.

5941. One question as to the future of silver. What do you apprehend is the future of silver likely to be, assuming that nothing is done to restore it to its former position?—Well, the view I take is that we cannot remain where we are; we are upon an inclined plane. Silver must either be a monetary metal, or else it will cease to be used altogether as money; and undoubtedly if this conference breaks up and pronounces an adverse judgment, I think that further demonetisation of silver will take place within a few years, which will push it to a still lower level. I can see no limit, in fact, to the depreciation of silver if it ceases to be used as a monetary metal by the principal nations of the world.

5942. And if that occurred it would aggravate to that extent all the evils which you attribute to the fall in silver up to the present time?—Certainly.

5943. As regards other countries have you any reason for believing that they would join with England in any project of the kind that you suggest for the adoption of a bimetallic system?—I think there is hardly a doubt that if England was to agree to adopt the bimetallic system in concert with France, Germany, and the United States, the United States and France would respond at once favourably, for they have offered to do so again and again at the conferences which have been held, and I was informed last week by the President of the Bank of the Netherlands, who is intimate with the German financial authorities, who said that there was no doubt in his opinion that Germany would join the league.

5944. Assuming your suggestions were adopted, you see no difficulty in maintaining the ratio between the two metals?—None whatever if that large union of countries were to adopt it. The ratio was virtually maintained by France alone, and latterly by a union of States called the Latin Union, without any great difficulty for 70 years, and I have no doubt whatever that if a large union such as that contemplated were effected, the ratio would be perfectly observed for any length of time that the union desired.

The witness withdrew.

Adjourned till Friday the 10th of June.

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APPENDIX I.

(Statement put in by Mr. Stewart

A TABLE showing the MONTHLY FLUCTUATIONS, in LONDON, in the PRICE

Years	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1833	58⅞	58⅞	58⅞	58⅞	58⅞	58⅞	59⅛—59⅛	59⅛	59⅛	59⅛	59⅛	59⅞
1834	59⅛	59⅛	60	59⅛	59⅛	59⅛	60⅛—60¼	60¼	60⅛	59⅞	59⅞	59⅞—59⅞
1835	59¼	60	60	59⅞	59⅞	59⅜—59⅝	59¼	59¼	59⅛	59⅛	59⅛	59⅛
1836	59⅛—59⅜	59⅜—60	59⅝—60⅛	59⅜—59⅝	60	60¼	60 —60¼	60⅛—60⅜	60⅛—60⅜	60⅛—60⅜	60¼	59⅞—60
1837	60¼—60⅜	60	60	59⅝—59⅞	59⅝—59⅞	59⅞	59⅞—59⅝	59 —59⅛	59⅛—59⅜	59 —59⅛	59⅛—59⅛	59⅛
1838	59⅜	59⅜	59⅜	59⅝—59⅜	59⅛	59⅝	59⅛	59⅛	59⅜	59⅜	59⅜—59⅝	60 —60⅛
1839	60⅜—60⅝	60⅜	60⅛—60⅜	60 —60⅛	60⅛—60⅜	60⅛	60⅛—60⅜	60⅛	60⅛	60⅜	60⅛—60⅛	60⅛
1840	60⅛—60⅜	60⅛	60⅛—60⅛	60⅛—60⅛	60⅛—60⅜	60⅜	60⅜—60⅝	60⅛—60⅝	60⅛—60⅝	60⅜—60⅝	60⅜	60⅛—60⅜
1841	60⅛	60⅜	60	60	60⅛	60⅛—60⅜	59⅞—60	60⅜	60⅜	59⅝—59⅞	59⅞	59⅝
1842	59⅛	59⅛—59⅜	59⅛	59⅛—59⅛	59⅜—59⅜	59⅞—60	59⅞	59⅝—59⅝	59⅝—59⅜	59⅛—59⅛	59⅛—59⅛	59⅜—59⅛
1843	59⅜—59⅛	59 —59⅛	59 —59⅛	59⅛	59⅛	59⅛—59⅜	59⅛	59⅜	59⅛	59⅛	59⅛	59⅛
1844	59⅛—59⅜	59⅝	59⅛	59⅝	59⅛	59⅝	59⅛—59⅜	59⅝	59⅝	59⅜	59⅜	59⅜
1845	59⅛	59⅛—59⅛	58⅝—59⅛	58⅞	58⅞—59⅛	59 —59⅛	59⅛—59⅛	59⅛—59⅛	59⅞	59⅛—59⅛	59⅛—59⅝	59⅛—59⅛
1846	59⅛	59⅛	59⅛	59	59	59	59⅛	59⅛	59⅛	59⅝—59⅞	60⅛	60⅛
1847	60⅛—60⅜	60⅜	60⅜	58⅞—60⅜	58⅞—59⅛	59 —59⅛	59⅞—60	59⅝—60	59⅛—59⅝	59⅛—59⅜	59⅛	59⅜
1848	59⅛—59⅛	59⅛—59⅜	59⅛—59⅛	58⅜—59⅛	59⅛—60	59⅛—59⅜	59⅛—59⅜	59⅜—59⅞	59⅞	59⅛—59⅜	59⅛—59⅜	59⅛
1849	59⅛—59⅛	59⅜	60 —60⅛	59⅞—60	59⅞	59⅛—59⅜	59⅜—59⅜	59⅜—59⅛	59⅛—59⅜	59⅜—59⅛	59⅜	59⅜—59⅜
1850	59⅛—59⅜	59⅛—59⅜	59⅛—59⅜	59⅜	59⅜	59⅛	59⅜—59⅜	59⅜	60 —60⅛	60⅛—60⅜	60⅜—61⅜	61⅜
1851	61⅛	61⅛—61⅜	61⅛	61⅛	61⅛—61⅜	60⅜—61⅛	60⅜—61	60⅛—61	60⅛—60⅛	60 —60⅛	60⅛	60⅜
1852	60⅛—60⅜	60⅛	60⅜	59⅜—60	59⅞	59⅞—60⅛	60⅜	60⅜	60⅜	60⅜—61⅛	61⅛—61⅜	61⅛—61⅜
1853	61⅛	61⅛	61⅜	61⅜	60⅜—61⅜	60⅜—61⅛	61⅛—61⅛	61⅛—61⅜	61⅜—62⅛	61⅞—62⅛	61⅞—62⅜	61⅜—61⅛
1854	61⅛—61⅜	61⅛	61⅞	61⅜—61⅜	60⅛—61⅜	61⅛—61⅛	61⅛	61⅛	61 —61⅛	61⅛—61⅜	61⅛—61⅛	61⅜
1855	61⅛—61⅛	61⅛—61⅜	60⅞	60⅜	61⅛—61⅜	61⅛	61⅛—61⅜	61⅜	61⅛	61⅛	60 —61⅜	61⅜
1856	60⅞—61⅛	61⅛—61⅜	60⅛—61	60⅛—61	61 —61⅛	60⅜—61⅛	60⅞	61⅛—61⅜	61⅜—62⅛	62	62⅛	61⅛—61⅜
1857	62⅛	61⅛—61⅜	61⅜—61⅜	61⅜—61⅜	61 —61⅛	61⅞	61⅛—61⅞	61⅜—62	61⅛	61⅛	61⅛—61⅜	62 —62⅛
1858	61⅛	61⅜—61⅞	61⅜	61⅛—61⅜	61⅛—61⅞	61⅜—61⅛	61⅛—61⅜	60⅜—61	60⅜	61⅛—61⅛	61⅛—61⅛	61⅛—61⅜
1859	61⅜—62	61⅜	61⅜—62⅛	61⅜—62⅜	62⅛—62⅜	62 —62⅛	62 —62⅜	61⅛—62	61⅜—62	61⅛—62	62	62
1860	62 —62⅜	62 —62⅛	61⅜—62⅛	61⅜	61⅜	61⅛—61⅜	61⅛	61⅜—61⅜	61⅜	61⅜—61⅜	61⅛—61⅜	61⅛—61⅜
1861	61⅛—61⅞	61⅛—61⅛	60⅜—61	60⅜—61⅜	60⅛—60⅞	60⅜—60⅜	60⅛—60⅛	60⅛—60⅛	60⅛—60⅜	60⅜—60⅞	60⅜—60⅛	60⅜—61⅛	61 —61⅛
1862	61 —61⅛	61⅛—61⅜	61⅛—61⅜	61⅛—61⅛	61⅛—61⅛	61 —61⅛	61 —61⅛	61⅛—61⅜	61⅛—61⅜	61⅛—61⅜	61⅛—62⅛	61⅜—61⅜
1863	61⅛—61⅜	61⅛—61⅜	61⅜—61⅛	61 —61⅜	61⅛—61⅛	61 —61⅛	61 —61⅛	61 —61⅛	61⅛—61⅜	61⅛—61⅜	61⅜—61⅜	61⅜—61⅜
1864	61⅜—62⅛	61⅛—61⅞	61⅛—61⅜	61⅛—61⅜	60⅞—61⅛	61⅛—61⅜	61⅛—61 5/16	61 —61⅛	61⅜—61⅜	60⅜—61⅛	60⅞—61⅜	61⅛
1865	61⅛—61⅜	61⅜—61⅛	61 —61⅜	60⅜	60 5/16—60⅜	60⅛—60⅜	60⅛—60⅜	60⅜—60⅞	60⅛—61	61⅛—61⅛	61⅛—61⅜	61 5/16—61⅛
1866	61⅜—61⅜	60⅞—61⅛	60⅞—61	61 —61⅛	61 —62	61⅜—62⅛	60⅜—61⅜	60⅜—60⅜	60⅜—61	60⅜—61	60⅜—61	60⅜—60⅞
1867	60⅞	60⅜	60⅜—60⅜	60⅜—61⅛	60⅜—60⅜	60⅜—60⅛	60⅛	60⅜—60⅛	60 5/16—60⅜	60⅛—60⅛	60⅜—60⅛	60⅜—60⅛
1868	60⅜—60⅛	60⅜—60⅛	60⅛—61⅛	60⅛—60⅜	60⅜—60⅜	60⅜	60⅛—60 7/16	60⅛—60⅜	60⅛—60⅛	60⅛—60⅛	60⅜—60⅛	60⅜—60⅜
1869	60⅜—60⅞	60⅜—61	60⅛—60⅜	60⅛—60⅛	60 —60⅜	60 —60⅛	60⅛—60 5/16	60⅜—60⅛	60⅜—60⅛	60⅜—60⅛	60⅜—60⅜	60⅜—60⅜
1870	60⅛—60⅛	60⅜—60⅛	60⅜—60⅜	60⅜—60⅛	60⅛—60⅛	60⅜—60⅛	60⅛—62	60⅛—60⅛	60⅛—60⅛	60⅜—60⅜	60⅛—60⅜	60⅜—60⅜
1871	60⅛—60⅜	60⅛—60⅛	60⅜—60⅛	60 1/16—60⅛	60 3/16—60⅛	60⅜—60 9/16	60⅜—60⅜	60⅜—60⅛	60⅛—60 11/16	60⅛—60⅛	60⅜—61	60⅜—60⅞
1872	60⅜—61⅛	60⅜—61⅛	60⅜—60⅜	60⅛—60⅜	60 1/16—60⅛	60 —60⅛	60 3/16—60 5/16	60 —60⅛	60 1/16—60 7/16	60 —60⅛	59⅛—59⅜	59⅜—59⅜
1873	59⅜—59 11/16	59⅜—59 13/16	59⅜—59⅞	59⅜	59⅜—59⅞	59 1/16—59⅛	59 1/16—59⅜	58 13/16—59 1/16	58 11/16—59⅛	58⅛—59	57⅞—58⅛	58 —58 7/16
1874	58 —59⅛	58⅛—59	58⅛—59⅜	58 3/16—59⅛	58⅛—58⅞	58⅛—59	58⅛—58⅛	57⅝—58⅛	57⅛—58	57⅛—57 3/16	57⅜—58⅛	57⅛—57⅜
1875	57⅜—57⅝	57⅜—57⅛	57 —57⅝	57⅛—57⅜	56⅛—57	55⅛—55⅞	55 1/16—55⅞	56 —56⅛	56 1/16—56⅜	56⅛—57⅛	56⅛—56 1/16	56⅛—56⅜
1876	54⅞—56⅛	53 —54⅞	52⅞—54⅞	53⅛—54	52 —54	50 —52	46⅜—51⅛	50⅛—53⅝	51⅛—52 5/16	52 —53⅛	53⅛—55	55⅛—58⅛
1877	56⅜—58⅛	56 —57⅜	53⅛—56⅛	53⅛—55	53⅜—54⅛	53⅛—54	53⅛—54⅛	54 —54⅛	54⅛—55⅛	54⅛—55⅛	54 —55	53⅛—54⅛
1878	53⅛—54	53 1/16—55⅛	54⅛—55	53 7/16—54⅛	53⅛—53⅞	52⅜—53 7/16	52 5/16—52 1/16	52⅛—52⅜	51⅛—52⅛	49⅛—51 5/16	50⅛—50⅜	49⅜—50 1/16
1879	49⅝—51	49⅛—50⅛	48⅞—50⅛	49⅛—50⅛	50 —51⅜	51⅜—53	51 —52⅛	51⅛—51⅞	51⅛—51⅛	51 1/16—53⅜	53 —53⅜	52⅜—55
1880	52⅛—52⅝	52 —52 9/16	51⅜—52⅜	51⅜—52⅛	52 1/16—52⅛	52 3/16—52⅞	52⅛—52⅞	52⅛—52⅞	52⅛—52⅜	51 1/16—52 5/16	51⅜—51⅞	51⅛—52
1881	51 —51⅜	51⅛—52⅛	52 —52⅛	52 —52⅛	51⅛—52	51 —51 1/16	50 1/16—52⅛	51⅛—51⅞	51⅛—51 1/16	51 1/16—52⅛	51⅜—52	51⅛—52
1882	51 1/16—52⅛	52 —52 1/16	51⅜—52 1/16	52 7/16—52 5/16	52⅛—52 7/16	51⅛—52⅜	51⅜—52	51⅛—52 3/16	51 5/16—52 1/16	51 3/16—51 1/16	50⅜—51⅛	50 —50⅛
1883	50 —50 9/16	50⅛—51	50⅛—51 1/16	50⅛—50 1/16	50 1/16—50⅛	50 1/16—50⅛	50 1/16—50 1/16	50 5/16—50 1/16	50 7/16—50⅛	50⅛—50 1/16	50⅛—51	50⅛—50 1/16	50 1/16—51
1884	50⅛—51	51 —51⅛	50 11/16—51 3/16	50 1/16—51	50⅛—50 1/16	50⅛—50 1/16	50 1/16—50⅛	50 3/16—50⅛	50⅛—50⅛	50 7/16—50⅛	49 1/16—50 7/16	49 1/16—49⅛
1885	49⅛—50	48 1/16—49 5/16	49 —49 7/16	48 1/16—49⅛	48 1/16—50	49 —49 7/16	49 1/16—49⅛	48 7/16—49 5/16	47 1/16—48⅛	47⅛—47⅛	47 3/16—47⅛	46 7/16—47⅛
1886	46 7/16—47	46⅛—46 11/16	46 11/16—46⅞	46 —46 1/16	44⅛—46	44 1/16—45⅜	42 —44 5/16	42 —42⅛	42⅛—45	44⅛—45⅞	45⅞—47	45—46⅞

* Including bills on China for this year only. (The East India Company had the monopoly of the trade with China up to 1833.)

APPENDIX I.

Pixley. See *Question* 139.)

of BAR SILVER per Oz. Std. from January 1833 to December 1886.

Yearly Average.	Silver coined in England.	Amount of Bills and Telegraphic Transfers drawn in England on Indian Governments.	Export of Silver to the East.	Imports of Silver in Bars and Coin.	Average Bank Rate of Discount.	REMARKS.
	£	£	£			
59 3/16	145	55,510*	1,895,023†		From 1784 to May 1839 the rate never exceeded 5 per cent., nor was less than 4 per cent.	Continuance of East India Company. Slavery abolished; compensation to owners, 20,000,000*l.* Renewal of bank charter; bank notes a legal tender.
59 5/16	432,775	398,253	2,146,465			Great importation of gold into New York. Substitution of metallic currency for paper in the United States.
59 1/16	146,665	732,803	2,036,167			Extinction of United States national debt. Bank of United States wound up, owing to refusal of congress to re-charter it.
60	497,719	2,045,254	2,610,101			Banking and commercial embarrassments in United States. Spanish Civil War.
59 9/16	75,385	2,042,232	3,010,190			Commencement of panic in London. Discounts refused. Many houses trading with the United States stop payment. Accession of Queen Victoria. Rebellion in Canada.
59½	174,042	1,706,184	1,945,264		Per cent.	Resumption of specie payments in United States. Famine in various parts of British India. Affghan War.
60⅜	390,654	2,346,592	1,786,253		5¼	Banks in United States suspend payments in specie. War with China.
60⅝	207,900	1,439,525	1,841,335		5	Misunderstanding with France. Treaty of London for settlement of Eastern question.
60 3/16	89,641	1,174,450	3,143,292		5	Great depression in every branch of manufacturing industry.
59 7/16	192,852	2,589,283	4,794,678		4	Peace with China. Income Tax Act passed.
59 3/16	239,580	1,197,438	3,752,472		4	Treaty of commerce opens China to all nations.
59½	610,632	2,801,731	2,495,959		4	Bank Charter Act passed. Consols 101¼. Prior to September this year the bank never reduced the rate below 4 per cent.
59¼	647,658	2,516,951	2,939,922		3	Railway mania. Sikh War.
59 5/16	559,548	3,065,709	1,973,391		3¼	Commercial and railway panic. Repeal of corn laws.
59 1/16	125,730	3,097,042	4,204,503		5	Year of panic. 10,000,000*l.* granted for relief of famine in Ireland. Gold discovered in California.
59⅛	35,442	1,541,804	3,396,807		3¾	Sikh War.
59¼	119,592	1,889,195	3,811,809		3	First importation of Californian gold into England. Annexation of the Punjaub.
60 3/16	129,096	2,935,118	5,052,059		2½	Average of Consols 96⅛.
61	87,868	3,236,458	1,715,100		3	Discovery of gold in Australia.
60½	189,596	2,777,523	2,447,450		2	Consols touched 102, and averaged 99⅛.
61½	701,544	3,317,122	3,117,980		3½	Australian Mint established.
61½	140,580	3,850,565	3,095,490		5	Russian War began.
61 3/16	195,510	3,669,678	6,431,733		4¾	Loan of 16,000,000*l.* Fall of Sebastopol.
61 5/16	462,528	1,484,040	12,113,991		5¾	Russian War ends.
61¾	373,230	2,819,711	16,731,915		6¾	Panic. Suspension of Bank Act. Indian Mutiny. Loan of 1,000,000*l.* to East India Company.
61 7/16	445,896	628,499	4,753,933	£ 6,700,000	3½	End of Indian Mutiny.
62 1/16	647,064	25,901	14,828,521	14,772,460	2¾	Loan of 5,216,528*l.* to East India Company.
61 11/16	218,403	4,694	8,478,739	10,394,000	4½	Commercial treaty with France.
60 13/16	209,484	707	6,824,807	6,590,000	5½	Financial depression in India. American Civil War begins.
61 7/16	148,518	1,193,729	10,091,460	11,753,000	2½	Great distress in cotton manufacturing districts. Panic.
61⅜	161,172	6,641,576	8,263,011	10,888,130	4½	Large exports of gold to the continent to pay for silver.
61⅜	535,194	8,979,521	6,254,004	10,827,300	7½	13,000,000*l.* silver exported from France.
61 3/16	501,732	6,789,473	3,598,058	6,980,000	4½	Close of American War.
61¼	493,416	6,998,899	2,365,626	10,778,000	7	Commercial and Joint Stock Companies panic. Bank declined to sell bar gold.
60 9/16	193,842	5,613,746	642,912	8,020,000	2½	Great decline in export of silver; only 2,500,000*l.* sent from France.
60¼	301,356	4,137,285	1,635,642	7,716,420	2½	Abyssinian Expedition.
60 7/16	76,428	3,705,741	2,362,943	6,730,000	3½	Distress in Lancashire.
60 9/16	336,798	6,980,122	1,579,473	10,649,000	3	Franco-Prussian War. Panics.
60⅛	701,514	8,443,509	3,712,473	16,520,000	3½	8,500,000*l.* gold exported to Hanse towns. Peace between France and Germany
60 5/16	1,243,836	10,310,339	5,654,451	11,140,500	4½	8,050,000*l.* gold exported to Hanse towns. Commencement of decline in price of silver.
59¼	1,081,674	13,939,095	2,497,576	12,302,220	5½	10,000,000*l.* gold exported to Hanse towns. German Government announces the demonetization of silver.
58 5/16	896,604	13,285,678	7,092,726	11,797,990	3½	Enormous increase of bullion in Bank of France, 22,000,000*l.*, mostly gold.
56¼	594,001	10,841,615	3,714,404	9,506,757	3¼	Heavy commercial failures. Large export of gold to Germany. Continued decline in price of silver.
52⅛	222,354	11,513,233	10,914,407	13,585,608	2½	Remarkable fluctuations in rates of Indian exchanges and bar silver, the latter having touched the lowest price on record.
54 13/16	420,948	8,637,530	17,007,458	21,625,652	2½	Great famine in India. Russo-Turkish War.
52 9/16	613,998	13,978,584	5,842,577	11,453,105	3¼	General depression in trade. Large bank failures. Russo-Turkish War ended.
51¼	549,054	14,705,700	7,034,967	10,520,012	2½	Suspension of sales by German Government. Marked diminution in production of Californian mines.
52¼	761,508	15,482,092	6,135,520	6,827,471	2¾	Consols touched 100⅛. Reported existence of large quantities of gold in South India.
51 11/16	997,128	16,273,677	4,288,009	6,902,210	3½	Meeting of conference in Paris respecting bi-metallism, which adjourned without coming to any practical conclusion.
51½	209,880	12,053,665 to 2nd Jan. 1883.	6,423,270	9,243,375	4½	War with Egypt.
50 9/16	1,274,328	18,909,000	7,125,454	9,468,002	3½	Completion of Italian order for gold.
50⅛	658,548	16,966,112	8,418,522	9,546,496	2 9/16	War in Egypt; income tax increased. Franco-Chinese complications.
48⅝	720,918	11,018,000	8,010,925	9,377,601	2¾	Suspension of the coinage of the Bland dollar, recommended by the President of the United States.
45⅛	417,384	11,791,000	5,846,222	8,166,249	3	Great depression in trade.

† The above totals from 1833 to 1850 include exports from other countries as well as England, from 1851 to 1875 from Southampton only, from 1876 shipments *viâ* Southampton, Venice, and Marseilles.

APPENDIX II.

Tables put in by Sir Hector Hay. See Questions 290, 295

(*a*) GOLD (IN £ MILLIONS).

—	ESTIMATED PRODUCTION OF THE WORLD.						ENGLAND.		INDIA.		COINAGE OF SOVEREIGNS.			COINAGE OF PRINCIPAL FOREIGN COUNTRIES.							
	Australia.	United States.	Mexico and South America.	Russia.	Other Countries.	Total.	Imports.	Exports.	Imports.	Exports.	Royal Mint.	Australia.	Total Sovereigns.	United States.	Germany.	Russia.	France.	Belgium.	Italy.	Austria.	Total Foreign.
1852	20·6	12·	1·	2·4	·5	36·5		4·3	1·3	2·	8·7	—	8·7	11·4			1·1		·4	·2	13·1
1853	14·1	13·	1·	2·4	·5	31·		12·7	1·1	1·5	12·	—	12·	7·9			12·4		·1	·4	20·8
1854	9·5	12·	1·	2·4	·5	25·4		16·5	·9	1·2	4.1	—	4·1	5·2			21·1		·1	·3	26·7
1855	12·1	11·	1·	2·4	·5	27·		11·8	2·5	·8	9·	·5	9·5	5·8			18·		·1	·4	24·3
1856	14·3	11·	1·	2·7	·5	29·5		12·	2·2	1·1	6·	1·2	7·2	7·3			20·3		·2	·3	28·1
1857	11·4	11·	1·	2·7	·5	26·6		15·	2·8	·8	4·8	·8	5·6	3·2			22·9		·1	·6	26·8
1858	10·7	10·	·9	2·7	·5	24·8	22·8	12·6	4·4	·6	1·2	1·3	2·5	6·	·3	3·	15·5		·2	·2	25·2
1859	10·8	10·	·9	2·7	·5	24·9	22·3	18·1	4·3	·9	2·6	1·2	3·8	3·5	·1	3·	28·1		·5	·2	35·4
1859	10·8	10·	·9	2·7	·5	24·9	22·3	18·1	4·3	·9	2·6	1·2	3·8	3·3	·1	3·	17·1		·2	·2	23·9
1860	10·5	9·2	·9	2·7	·5	23·8	12·6	15·6	4·2	0·1	3·1	1·6	4·7	10·1	—	2·7	3·9		·2	·2	17·1
1861	9·8	8·6	·9	3·	·5	22·8	12·2	11·2	5·2	·7	8·2	1·7	9·9	10·1	—	2·7	8·6		1·6	·2	22·2
1862	9·3	7·8	·8	3·	·5	21·4	19·9	16·	6·0	1·0	7·8	2·5	10·3	9·1	—	2·7	8·6		2·6	·1	19·8
1863	8·9	8·	·8	3·1	·5	21·3	19·1	15·3	9·	1·1	7·	1·5	8·5	4·1	·1	4·5	8·4		·5	·2	21·2
1864	9·1	9·2	·8	3·	·5	22·6	16·9	13·3	9·8	1·9	9·5	2·7	12·2	4·3	·1	5·2	10·9		2·7	·2	18·1
1865	8·8	10·6	·8	3·3	·5	24·	14·5	8·5	6·4	1·7	2·4	2·3	4·7	5·	—	3·	6·4	·8			
1866	8·8	10·7	·8	3·4	·5	24·2	23·5	12·7	4·9	·7	5·1	2·9	8·	5·7	·4	3·	14·6	·4	·2	·3	24·6
1867	8·3	10·3	·7	3·4	·5	23·2	15·8	7·9	4·8	·2	·5	2·4	2·9	5·6	·1	3·	7·9	1·1	·2	·2	18·1
1868	9·7	9·6	·6	3·6	·5	24·	17·1	12·7	5·2	—	1·6	2·3	3·9	3·6	·1	2·5	13·6	1·1	·3	·2	21·4
1869	9·3	9·9	·5	4·	·5	24·2	13·8	8·5	5·7	·1	7·4	1·3	8·7	4·4	—	3·	9·3	1·	·2	·1	18·
1870	7·7	10·6	·5	4·5	·5	23·8	18·8	10·	2·8	·5	2·3	1·2	3·5	4·5	—	3·7	2·2	2·5	—	·2	13·1
1871	9·6	7·4	1·	4·8	·5	23·3	21·6	20·5	2·8	·5	9·9	2·8	12·7	4·2	—	·7	2·	1·8	—	·5	9·2
1872	7·8	8·1	1·	4·6	·5	22·	18·5	19·7	3·6	—	15·3	2·7	18·	4·1	20·7	1·8	—	—	—	·6	27·1
1873	8·	8·3	1·	4·5	·5	22·3	20·6	19·	2·6	·1	3·4	2·3	5·7	7·	28·7	2·3	—	—	·8	·5	39·3
1874	7·8	8·2	1·	4·5	·5	21·5	18·	10·6	1·6	·3	1·5	3·4	4·9	10·1	4·6	3·7	1·	2·4	·2	·4	22·4
1875	7·5	8·5	1·	4·5	·6	22·1	23·	18·6	2·1	·2	·2	4·	4·2	6·7	8·1	3·	9·4	3·3	·1	·4	31·
1876	7·2	9·	1·	4·5	·6	22·3	23·	14·	1·8	·3	4·7	3·8	8·5	7·6	7·8	4·5	7·	1·6	·1	·5	29·1
1877	6·7	9·5	1·2	5·4	·6	23·4	15·	20·	1·4	1·2	1·	3·1	4·1	8·7	5·5	4·9	10·2	4·7	·2	·6	34·8
1878	6·5	8·	1·5	5·4	·7	22·1	21·	14·	1·6	1·1	2·3	3·5	5·8	10·5	6·1	5·2	7·4	2·	·3	·5	32·
1879	6·2	6·8	1·5	5·5	·8	20·8	13·2	10·5	1·5	2·4	—	4·1	4·1	8·2	1·7	5·5	1·	—	·1	·4	16·9
1880	6·5	7·	1·5	5·4	·8	21·2	9·	11·5	2·	·3	4·1	4·5	8·6	11·2	1·4	4·8	—	—	·1	·4	17·9
1881	6·7	6·6	1·6	4·8	·9	20·6	10·	15·5	3·7	—	—	3·7	5·7	15·7	·8	4·	·9	—	·7	·4	22·5
1882	6·5	6·3	1·7	4·7	1·	20·2	14·4	12·1	4·8	—	—	3·8	3·8	17·9	·7	3·3	1·5	·4	5·6	·5	29·9
1883	5·8	6·1	1·7	5·	1·	19·6	7·7	6·5	5·1	·2	1·4	3·3	4·7	7·2	4·	4·6	—	—	·2	·5	16·5
1884	5·9	5·5	1·7	5·	1·	19·1	10·9	11·7	5·5	—	2·3	4·5	6·8	5·6	2·8	3·5	—	—	·1	·4	12·4
1885	6·	5·8	1·7	5·	1·	19·5	13·4	11·5	4·8	·1	3·	4·5	7·5	4·9	·4	4·	—	—	·1	·5	9·9

APPENDIX.

(2) SILVER (IN £ MILLIONS).

—	ESTIMATED PRODUCTION OF THE WORLD.					ENGLAND.		INDIA.		COINAGE OF THE PRINCIPAL COUNTRIES.										
	United States.	Mexico and South America.	Germany.	Other Countries.	Total.	Imports.	Exports.	Imports.	Exports.	Royal Mint.	India.	United States.	Germany.	Russia.	France.	Belgium.	Italy.	Austria.	Total Coinage.
1852 - -	—	6.	·4	1·7	8·1	6.	8·7			·2	2·2	2.							9·1
1853 - -	—	6.	·4	1·7	8·1	6·1	2·5			·7	2·9	1·8				9.		·1	7·9
1854 - -	—	6.	·4	1·7	8·1	6.	3·8			1·1	2·9	1·7						—	9·7
1855 - -	—	6.	·4	1·7	8·1	7.	1·1			·2	1·9	·7			1·7				3·8
1856 - -	—	6.	·5	1·7	8·2	12·8	8·8			·5	7·8	1·1			1·8				11·
1857 - -	—	6.	·5	1·7	8·2	18·2	12·2			1·4	11·2	1·3		7.	1·2				13·4
1858 - -	—	6.	·5	1·7	8·2	6·7	7·1			·8	11·2	1·6	1·2				1.		21·1
1859 - -	—	6.	·5	1·7	8·2	14·8	12·6			·6	8·4	·6							17·9
1860 - -	—	6.	·5	1·7	8·3	10·4	10·			·2	10·7	·5	4·8	·6	·8		9·	·1	19·7
1861 - -	—	6.	·6	1·6	8·8	6·6	9·6	6·4	1·1	·2	6·8	·2	4·	·9	·1		1·8	·1	12·9
1862 - -	—	6.	·6	1·6	9·1	11·7	13·3	8·8	·7	·1	7·5	·2	2·2	·8	—		1·.	—	12·2
1863 - -	1·7	6.	·6	1·6	9·9	6·9	11·2	9·4	1·1	·2	9·4	·3	2·2	·8	—		1·.	—	12·6
1864 - -	2·3	6.	·6	1·6	10·4	10·8	9·8	14·	1·2	·2	11·6	·1	1·.	·9	·8	—	1·2	—	16·6
1865 - -	2·3	6.	·6	1·6	10·6	7·	6·6	11·5	1·4	·2	10·9	·1	1·.	·9	—	—	·8	—	15·4
1866 - -	2·.	6.	·8	1·6	10·4	10·8	8·9	20·2	1·5	·2	14·6	·1	4·4	·5	—	·4	·6	·2	21·2
1867 - -	2·7	7.	·8	1·6	10·1	8·	6·4	9·7	1·7	·2	6·2	·2	5·6	·8	2·2	1·8	·6	—	17·6
1868 - -	2·4	7.	·8	1·6	9·8	7·7	7·6	7·	·8	·3	4·3	·2	1·3	·7	3·7	2·2	·8	—	13·5
1869 - -	2·4	7.	·8	1·6	9·8	6·7	7·9	10·	1·4	·1	4·3	·2	·9	·9	3·3	3·5	·2	·1	12·5
1870 - -	2·2	7.	·8	1·6	11·1	10·6	8·9	8·3	·9	·3	7·5	·3	·9	·8	2·2	4·6	·4	·1	17·1
1871 - -	3·8	7.	1·2	1·8	11·8	16·5	18·	2·7	1·7	·7	1·7	·4	1·5	·8	·9	·9	1·4	·7	9·
1872 - -	4·	7.	1·2	1·8	11·7	11·	10·5	8·	1·5	1·2	1·7	·6	·3	·9	·5	1·1	·4	1·4	7·9
1873 - -	4·8	7.	1·2	1·8	11·2	18·	10·	1·9	1·2	1·1	·4·	·6	·1	·7	·6	4·4	·5	1·7	20·1
1874 - -	6·9	7.	1·2	1·8	12·8	12·3	12·	4·1	1·6	·9	2·4	1·2	2·2	·6	2·4	·5	2·4	·8	13·4
1875 - -	6·8	7.	1·2	1·8	13·8	10·	6·	1·4	1·4	·6	4·9	2·	2·6	·7	3·	·6	2·	1·2	20·6
1876 - -	7·8	7.	1·1	1·8	15·4	13·	14·	2·5	1·9	·2	2·6	2·8	10·3	·8	2·1	·4	1·5	1·6	23·8
1877 - -	9·2	7.	1·2	1·8	17·4	20·	19·	10·	2·8	·4	6·3	2·7	2·2	1·2	·7	—	·7	1·4	18·9
1878 - -	7·2	6.	1·2	1·8	16·1	11·	11·2	13·8	1·1	·6	16·3	5·6	·3	2·4	·1	—	·4	2·4	28·1
1879 - -	7·2	6.	1·3	1·8	15·8	10·2	11·	5·6	1·6	·2	7·3	2·5	—	1·2	—	—	—	·8	20·8
1880 - -	7·9	6.	1·4	1·8	17·5	6·2	7·2	9·6	1·6	·8	10·3	2·6	·8	1·1	—	—	—	1·4	19·2
1881 - -	9·8	7.	1·4	1·6	18·8	6·7	7·	6·3	1·4	1·	4·4	2·2	·4	·7	—	—	·3	1·8	14·1
1882 - -	9·6	7.	1·4	1·6	18·8	9·1	8·9	6·3	1·1	·2	2·9	2·2	·4	·1	—	—	·2	·7	10·
1883 - -	9·6	8.	1·7	1·8	20·6	9·3	8·7	8·3	1·3	·2	7·3	2·7	1·	·2	—	—	·3	1·1	16·3
1884 - -	8·7	8.	1·8	1·8	20·8	9·5	9·7	7·4	·7	·3	4·1	2·7	—	·3	—	—	·4	1·	12·2
1885 - -	8·9	8.	1·9	2·	21·8	9·3	9·6	9·1	1·8	·7	6·	2·8	1·	·7	—	·3	—	·7	14·8

APPENDIX III.

Papers put in by Mr. Giffen.

See QUESTION 472.

(A.)—ESTIMATED AMOUNT of the production of GOLD and SILVER in each of the under-mentioned periods and years.

[From Soetbeer's "Materialien," &c., p. 1.]

PERIODS.	WEIGHT.				VALUE.					
	Gold.	Silver.	Proportion.		Gold.	Silver.	Proportion.		Gold and Silver.	Value in Gold of one Kilogramme of Silver.
	Kilogrammes.	Kilogrammes.	Gold. %	Silver. %	(Thousands of Marks.)		Gold. %	Silver. %	Thousands of Marks.	
(Annual Average.)										Marks.
1493–1520	5,800	47,000	11·0	89·0	16,182	12,220	57·0	43·0	28,402	260
1521–1544	7,160	90,200	7·4	92·6	19,976	22,370	47·2	52·8	42,346	248
1545–1560	8,510	311,600	2·7	97·3	23,742	76,965	23·6	76·4	100,707	247
1561–1580	6,840	299,500	2·2	97·8	19,083	72,779	20·8	79·2	91,862	243
1581–1600	7,380	418,900	1·7	98·3	20,590	98,860	17·2	82·8	119,450	236
1601–1620	8,520	422,900	2·0	98·0	23,771	96,421	19·8	80·2	120,192	228
1621–1640	8,300	393,600	2·1	97·9	23,157	78,326	22·8	77·2	101,483	199
1641–1660	8,770	366,300	2·3	97·7	24,468	70,330	25·8	74·2	94,798	192
1661–1680	9,260	337,000	2·7	97·3	25,835	62,682	29·2	70·8	88,517	186
1681–1700	10,765	341,900	3·1	96·9	30,034	63,593	32·1	67·9	93,627	186
1701–1720	12,820	355,600	3·5	96·5	35,768	65,075	35·5	64·5	100,843	183
1721–1740	19,080	431,200	4·2	95·8	53,233	79,772	40·0	60·0	133,005	185
1741–1760	24,610	533,145	4·4	95·6	68,662	100,764	40·5	59·5	169,426	189
1761–1780	20,705	652,746	3·1	96·9	57,767	124,021	31·8	68·2	181,788	190
1781–1800	17,790	879,060	2·0	98·0	49,634	162,626	23·4	76·6	212,260	185
1801–1810	17,778	894,150	1·9	98·1	49,600	160,053	23·7	76·3	209,653	179
1811–1820	11,445	540,770	2·1	97·9	31,932	97,339	24·7	75·3	129,271	180
1821–1830	14,216	460,560	3·0	97·0	39,663	81,519	32·7	67·3	121,182	177
1831–1840	20,289	596,450	3·3	96·7	56,606	105,572	34·9	65·1	162,178	177
1841–1850	54,759	780,415	6·6	93·4	152,777	137,353	52·7	47·3	290,130	176
1851–1855	199,388	886,115	18·4	81·6	556,308	160,387	77·6	22·4	716,695	181
1856–1860	201,750	904,990	18·2	81·8	562,899	164,709	77·4	22·6	727,608	182
1861–1865	185,057	1,101,150	14·4	85·6	516,326	199,308	72·1	27·9	715,634	181
1866–1870	195,026	1,339,085	12·7	87·3	544,139	239,696	69·4	30·6	783,835	179
1871–1875	173,904	1,969,425	8·1	91·9	485,207	344,649	58·5	41·5	829,856	175
1876–1880	173,414	2,450,252	6·6	93·4	481,045	382,062	55·7	44·3	863,107	156
1881–1885	149,137	2,861,709	5·0	95·0	416,098	428,760	49·3	50·7	844,858	150

(B.)—Detailed Estimate of the Production of Gold and Silver in the under-mentioned Periods and Years.

[From Soetbeer's Materialien, &c., p. 2.]

Gold (in kilogrammes).

	Periods.	United States.	Australia.	Russia.	Mexico, Colombia, Brazil.	Other Countries.	Total.	Estimate of the Director of the U.S. Mint.
Annual Average.	1851–1855	88,800	69,573	24,730	7,710	8,575	199,388	—
	1856–1860	77,100	82,392	26,570	7,000	8,688	201,750	—
	1861–1865	66,700	77,634	24,084	7,650	8,989	185,057	—
	1866–1870	76,000	73,526	30,050	6,940	8,510	195,026	—
	1871–1875	59,500	63,129	33,380	7,240	10,655	173,904	—
Years.	1876	60,000	49,156	33,600	7,200	16,000	165,956	—
	1877	70,300	45,045	41,000	7,100	16,000	179,445	171,453
	1878	76,800	43,747	42,100	7,200	16,000	185,847	179,175
	1879	58,300	43,307	42,600	7,100	16,000	167,307	163,675
	1880	54,200	45,215	41,400	6,700	16,000	163,515	160,152
	1881	52,200	45,564	38,500	6,600	16,000	158,864	155,016
	1882	48,900	44,075	32,700	6,300	16,500	148,475	148,939
	1883	45,140	40,705	35,800	6,400	16,500	144,545	141,733
	1884	46,343	42,400	32,908	8,000	16,500	146,151	143,381
	1885	47,850	—	—	—	—	—	—

Silver (in kilogrammes).

	Periods.	Mexico.	Peru, Bolivia, Chile.	United States.	Germany.	Other Countries.	Total.	Estimate of the Director of the U.S. Mint.
Annual Average.	1851–1855	466,100	218,600	8,300	48,960	144,155	886,115	—
	1856–1860	447,800	190,400	6,200	61,510	199,080	904,990	—
	1861–1865	473,000	191,100	174,000	68,320	194,730	1,101,150	—
	1866–1870	520,900	229,800	301,000	89,125	198,260	1,339,085	—
	1871–1875	601,800	374,700	564,800	143,080	285,045	1,969,425	—
Years.	1876	601,000	350,000	933,000	139,779	300,000	2,323,779	—
	1877	634,000	350,000	957,000	147,612	300,000	2,388,612	2,174,610
	1878	644,000	350,000	1,089,376	167,988	300,000	2,551,364	2,282,573
	1879	699,000	350,000	981,000	177,507	300,000	2,507,507	2,313,731
	1880	701,000	350,000	942,987	186,011	300,000	2,479,998	2,326,941
	1881	721,000	350,000	1,034,649	186,990	300,000	2,592,639	2,458,322
	1882	738,000	390,000	1,126,083	214,982	300,000	2,769,065	2,690,573
	1883	739,000	510,000	1,111,457	235,063	300,000	2,895,520	2,812,972
	1884	785,000	450,000	1,174,205	248,117	300,000	2,957,322	2,770,610
	1885	—	—	1,241,000	278,000	(340,000)	—	—

(C.)—Detailed Estimate of the Production of Gold and Silver in the under-mentioned Periods and Years.

[From Soetbeer's Materialien, &c., p. 3.]

Gold (in Thousands of Marks).

	Periods.	United States.	Australasia.	Russia.	Mexico, Colombia, Brazil.	Other Countries.	Total.	Estimate of the Director of the U.S. Mint.
Annual Average.	1851–1855	247,752	194,124	68,997	21,511	23,924	556,308	—
	1856–1860	215,109	229,891	74,130	19,530	24,240	562,899	—
	1861–1865	186,093	216,617	67,194	21,343	25,079	516,326	—
	1866–1870	212,040	205,153	83,840	19,363	23,943	544,139	—
	1871–1875	166,005	176,145	93,130	20,200	29,727	485,207	—
Years.	1876	167,400	137,155	93,744	20,088	44,640	463,027	—
	1877	196,137	125,684	114,390	19,809	44,640	500,660	113,947
	1878	214,272	122,063	117,459	20,088	44,640	518,522	119,023
	1879	162,657	120,837	118,854	19,809	44,640	466,797	108,736
	1880	151,218	126,161	115,506	18,693	44,640	456,218	106,387
	1881	145,638	127,134	107,415	18,414	44,640	443,241	103,023
	1882	136,431	122,981	91,233	17,577	46,035	414,257	98,985
	1883	125,941	113,575	99,882	17,856	46,035	403,289	94,197
	1884	129,297	118,296	91,813	22,320	46,035	407,761	95,293
	1885	133,501	—	—	—	—	—	—

Silver (in Thousands of Marks).

	Periods.	Mexico.	Peru, Bolivia, Chile.	United States.	Germany.	Other Countries.	Total.	Estimate of the Director of the U.S. Mint.
Annual Average.	1851–1855	84,364	39,567	1,502	8,862	26,092	160,387	—
	1856–1860	81,500	34,653	1,128	11,195	36,233	164,709	—
	1861–1865	85,613	34,589	31,494	12,366	35,246	199,308	—
	1866–1870	93,241	41,134	53,879	15,953	35,489	239,696	—
	1871–1875	105,315	65,572	98,840	25,039	49,883	344,649	—
Years.	1876	94,357	54,950	146,481	21,945	47,100	364,833	—
	1877	102,708	56,700	155,034	23,913	48,600	386,955	81,041
	1878	99,820	54,250	168,853	26,038	46,500	395,461	84,238
	1879	106,248	53,200	149,112	26,981	45,600	381,141	83,735
	1880	107,954	53,900	145,220	28,646	46,200	381,920	85,321
	1881	110,313	53,550	158,301	28,609	45,900	396,673	102,168
	1882	112,914	59,670	172,291	32,892	45,900	423,667	111,822
	1883	110,850	76,500	166,719	35,259	45,000	434,328	116,923
	1884	117,750	67,500	176,130	37,218	45,000	443,598	115,148
	1885	—	—	178,704	40,032	(48,960)	—	—

(D.)—STATEMENT of the AMOUNT of GOLD in the under-mentioned BANKS and STATE TREASURIES on the 31st December in each Year named.

[From Soetbeer's "Materialien," &c., p. 70; with the exception of the general total which is here inserted, subject to the observation that prior to 1879, there was a certain amount of gold in reserve in the United States not here accounted for, so that the total is not quite on a uniform basis throughout.]

YEARS.	Bank of England and Scotch and Irish Banks of Issue.	Australian Banks.	Bank of the Netherlands.	Belgian National Bank.	Bank of France.	Swiss Banks of Issue.	Italian Banks of Issue and Italian Treasury.	Austro-Hungarian Bank.	National and other Banks of Issue in Sweden.	Norwegian Bank.	Danish National Bank.	Russian National Bank.	United States Treasury, and Banks of Issue in that Country.	TOTAL.
	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.	Thousands of Marks.
1872	622,012	—	47,548	30,303	526,960	—	73,503	138,808	7,490	—	17,105	597,182	—	2,060,911
1873	595,442	158,098	67,953	30,245	489,040	—	73,173	141,055	16,780	23,381	32,122	618,207	—	2,245,946
1874	581,932	165,514	94,006	46,755	809,680	—	72,777	145,483	17,873	21,894	37,530	639,172	—	2,632,616
1875	596,241	172,594	117,726	62,324	939,440	—	53,805	135,708	22,015	16,024	43,183	643,459	—	2,802,519
1876	731,093	192,107	109,239	63,232	1,224,320	—	60,396	140,444	21,462	24,772	50,591	391,183	—	3,008,839
1877	646,861	174,773	85,866	48,960	941,680	—	61,444	134,752	19,710	16,351	37,979	399,436	—	2,567,812
1878	719,123	167,305	75,878	49,064	786,880	—	63,492	134,749	16,500	14,572	42,375	443,239	—	2,513,177
1879	693,410	206,135	124,823	57,308	593,280	—	64,342	117,264	22,566	19,939	47,237	483,316	666,457	3,096,077
1880	632,672	243,673	96,665	58,450	451,415	—	62,093	130,021	23,280	26,046	59,048	545,077	1,065,257	3,393,697
1881	554,710	224,950	30,869	61,872	524,557	—	57,044	137,451	22,109	23,784	54,902	545,093	1,238,603	3,475,944
1882	575,593	215,761	8,964	57,508	771,585	26,558	61,759	158,345	23,370	25,200	54,241	545,102	1,093,912	3,617,898
1883	593,017	210,712	39,962	57,508	760,443	31,521	488,844	155,364	23,291	25,985	54,829	545,102	1,147,352	4,133,930
1884	567,579	283,668	46,150	52,740	801,135	37,506	493,026	157,644	24,091	26,126	52,323	545,103	1,166,697	4,253,788
1885	564,824	263,560	81,437	55,600	925,932	39,330	396,800	138,145	24,592	21,834	52,047	545,107	1,408,056	4,517,264

(E.)—Estimated Amount of the Gold and Silver coined in each of the under-mentioned Countries down to 1885.

[From Soetbeer's "Materialien," &c., p. 77.]

Countries.	Coinage of the Precious Metals down to the End of 1885.					
	Gold.		Silver.		Gold and Silver.	
	Millions of Marks.	Per-centage Proportion.	Millions of Marks.	Per-centage Proportion.	Millions of Marks.	Per-centage Proportion.
Great Britain	2,220	16·61	432	5·51	2,652	12·50
British Colonies, excluding India	680	5·09	66	0·84	746	3·52
Netherlands	80	0·60	269	3·43	349	1·65
France, Italy, Belgium, Switzerland	4,195	31·39	3,200	40·80	7,395	34·87
Austria-Hungary	160	1·20	370	4·72	530	2·50
Germany	1,744	13·05	892	11·37	2,636	12·43
Scandinavia	115	0·86	42	0·54	157	0·74
Russia	770	5·76	280	3·57	1,050	4·95
United States	2,464	18·44	1,292	16·47	3,756	17·71
Other Countries in Europe and America	936	7·00	1,000	12·75	1,936	9·13
Total	13,364	100·00	7,843	100·00	21,207	100·00

(F.)—CHINA (see Questions 499 and 597).

(i.)—Statement showing the Excess of Imports over Exports (+) or Exports over Imports (−) of Gold into or from China in Trade with United Kingdom, France, British India, and the United States, in the under-mentioned Years.

Year.	United Kingdom.	France.	British India.*	United States.†	Total Excess Imports (+), Exports (−).
	Thousand £.	Thousand £.	Thousand £.	Thousand £.	Thousand £.
1858	− 35	—	− 1,559	No returns.	—
1859	—	—	− 2,768		
1860	—	—	− 1,770		
1861	− 5	—	− 1,124		
1862	—	—	− 1,788	+442§	− 1,346
1863	—	—	− 2,256	Not distinguished.	—
1864	—	Not distinguished‡	− 1,954	+767§	− 1,187
1865	− 1	„ ‡	− 2,945	+696	− 2,250
1866	− 2	„ ‡	− 2,818	+416	− 2,404
1867	− 4	—	− 2,343	+257	− 2,090
1868	− 1	—	− 2,479	+514	− 1,966
1869	− 1	Not distinguished‡	− 1,501	+428§	− 1,074
1870	− 62	+ 251‡	− 1,477	+403§	− 885
1871	− 1	Not distinguished‡	− 1,505	+326	− 1,180
1872	—	+ 9‡	− 1,332	+730	− 593
1873	− 129	Not distinguished‡	− 859	+665	− 323
1874	− 283	„ ‡	− 813	+556	− 540
1875	− 342	+ 42‡	− 1,084	+151	− 1,233
1876	− 808	Not distinguished‡	− 1,033	+ 80	− 1,761
1877	− 187	− 84	− 406	+234	− 443
1878	− 430	− 36	− 845	+134	− 1,177
1879	− 809	− 1,069	− 833	+ 60	− 2,651
1880	− 14	+ 439	− 1,184	+ 79	− 680
1881	− 20	Not distinguished‡	− 1,549	+ 69	− 1,500
1882	+ 4	„ ‡	− 1,377	+ 99	− 1,274
1883	− 194	„ ‡	− 1,168	+ 72	− 1,290
1884	− 69	− 186	− 1,361	+124	− 1,492
1885	− 1,191	—	− 926	+ 92	—

* From 1858 to 1866 years ended 30th April. From 1867 years ended 31st March.

† Years ended 30th June.

‡ For these years the imports of gold from China into France are not separately stated, but they are believed to have been small. The excess given in the table may, therefore, require a slight correction.

§ The excess of imports from the United States in 1862 and 1864, includes the excess of imports from the United States into Japan, and in 1869 and 1870 the excess of imports into Singapore.

Note.—Foreign moneys have been converted at the following rates:—Francs at the rate of 25, Rupees at the rate of 10, and Dollars at the rate of 4½ to the £ sterling.

(ii.)—STATEMENT showing the EXCESS of IMPORTS over EXPORTS (+) or EXPORTS over IMPORTS (−) of SILVER into or from CHINA in TRADE with UNITED KINGDOM, FRANCE, BRITISH INDIA, and the UNITED STATES in the under-mentioned Years.

Year.	United Kingdom.	France.	British India.*	United States.†	Total Excess, Imports (+) Exports (−).
	Thousand £.	Thousand £.	Thousand £.	Thousand £.	Thousand £.
1858	+1,565	+77	−809	No returns.	
1859	+4,043	+151	−2,199		
1860	+1,937	+492	−244		
1861	+1,022	+218	−215		
1862	+3,806	+155	−1,597	+234§	+2,598
1863	+2,588	+827	−899	Not distinguished.	
1864	+1,698	+527‡	−513	+368§	+2,080
1865	+863	+234‡	−194	+228	+1,131
1866	+390	+205‡	−4,817	+1,042	−3,180
1867	+261	+35	−5,295	+1,032	−3,967
1868	+829	+81	−4,405	+1,092	−2,403
1869	+1,670	+158‡	−2,937	+1,066§	−43
1870	−88	+23‡	−3,696	+818§	−2,943
1871	−2,812	− ‡	−1,242	+417	−3,637
1872	−23	−52	−1,190	+520	−745
1873	−187	Not distinguished.	−42	+826	
1874	−347	−1	−901	+1,390	+141
1875	+750	+341‡	−251	+1,224	+2,064
1876	+1,234	+1,336‡	−335	+1,571	+3,806
1877	+2,048	+178‡	+143	+2,979	+5,348
1878	+1,620	+106‡	−1,714	+3,242	+3,254
1879	+178	+140	−1,808	+1,461	−29
1880	+1,102	+66	−2,616	+1,259	−189
1881	+951	+106	−123	+647	+1,581
1882	+402	+173‡	−1,505	+820	−110
1883	+861	+216	−1,247	+1,375	+1,205
1884	+761	+50	−527	+1,821	+2,105
1885	+374		−1,011	+2,943	

* From 1858 to 1866 years ended 30th April. From 1867 years ended 31st March.

† Years ended 30th June.

‡ For these years the imports of silver from China into France are not separately stated, but they are believed to have been small. The excess given in the table may therefore require a slight correction.

§ The excess of imports from the United States in 1862 and 1864 includes the excess of imports from the United States into Japan, and in 1869 and 1870 the excess of imports into Singapore.

NOTE.—Foreign moneys have been converted at the following rates:—francs at the rate of 25, rupees at the rate of 10, and dollars at the rate of 4⅘ to the £ sterling.

(G.)—STATEMENT showing the VALUE of SILVER ORE, or ORE of which the greater part in VALUE is SILVER, imported into the UNITED KINGDOM in each Year from 1855 to 1885 inclusive. (*See* Question 653.)

Year.	Value.	Year.	Value.	Year.	Value.
	£		£		£
1855	564,580	1866	275,599	1876	499,775
1856	354,970	1867	165,587	1877	562,537
1857	299,511	1868	147,690	1878	529,785
1858	209,154	1869	178,398	1879	724,515
1859	342,637	1870	299,726	1880	633,360
1860	382,806	1871	953,956	1881	688,176
1861	289,373	1872	2,188,010	1882	750,079
1862	331,564	1873	1,020,593	1883	1,030,542
1863	272,826	1874	769,355	1884	1,089,768
1864	251,568	1875	545,164	1885	1,085,227
1865	382,391				

(H.)—TABLE showing the (AVERAGE) PER-CENTAGE of YEARLY PRICES to the MEAN PRICE of STAPLE ARTICLES in the NEW YORK MARKET from 1825 to 1880, and indicating the Annual Variations in the Purchasing Value of Money measured by the Prices of the Commodities named.

Taken from the Ninth Report of the Director of the Mint, United States (see Question 743).

Year.	Per-centage to Mean of Staple Articles.	Year.	Per-centage to Mean of Staple Articles.	Year.	Per-centage to Mean of Staple Articles.	Year.	Per-centage to Mean of Staple Articles.
1825	104·4	1839	108·8	1853	99·4	1867	113·0
1826	102·2	1840	95·3	1854	107·0	1868	107·6
1827	101·2	1841	92·6	1855	111·1	1869	108·2
1828	98·9	1842	81·0	1856	112·2	1870	113·1
1829	96·6	1843	80·0	1857	119·8	1871	108·1
1830	92·6	1844	82·7	1858	99·7	1872	112·6
1831	97·4	1845	86·3	1859	100·6	1873	107·6
1832	99·0	1846	85·7	1860	100·3	1874	106·8
1833	96·1	1847	92·6	1861	98·0	1875	98·3
1834	88·6	1848	82·8	1862	111·6	1876	94·2
1835	99·1	1849	83·5	1863	119·4	1877	98·0
1836	109·6	1850	88·9	1864	110·1	1878	88·0
1837	100·2	1851	89·3	1865	123·0	1879	94·7
1838	101·0	1852	91·9	1866	119·1	1880	90·3

APPENDIX IV.

Papers put in by Mr. A. Sauerbeck. See *Question* 904.

(A.) The Course of Prices of Commodities in England, from the Statistical Society's Journal.

Summary of Index Numbers. Groups of Articles, 1867–77 = 100.

—	Vegetable Food (Corn, &c.).	Animal Food (Meat, &c.).	Sugar, Coffee, and Tea.	Total Food.	Minerals.	Textiles.	Sundry Materials.	Total Materials.	Grand Total of 45 commodities.	Silver.*	Average Index Nos. of Prices for 10 Years.	
1846	106	81	98	95	92	77	86	85	89	97·5	1837–46	93
1847	129	88	87	105	94	78	86	86	95	98·1	1838–47	93
1848	92	83	69	84	78	64	77	73	78	97·8	1839–48	91
1849	79	71	77	76	77	67	75	73	74	98·2	1840–49	88
1850	74	67	87	75	77	78	80	78	77	98·7	1841–50	86
1851	73	68	84	74	75	75	79	76	75	99·9	1842–51	83
1852	80	69	75	75	80	78	84	81	78	99·9	1843–52	82
1853	100	82	87	91	105	87	101	97	95	101·2	1844–53	83
1854	120	87	85	101	115	88	109	104	102	101·1	1845–54	85
1855	120	87	89	101	109	84	109	101	101	100·7	1846–55	86
1856	109	88	97	99	110	89	109	102	101	101·0	1847–56	88
1857	105	89	119	102	108	92	119	107	105	101·5	1848–57	89
1858	87	83	97	88	96	84	102	94	91	101·0	1849–58	90
1859	85	85	102	89	98	88	107	98	94	102·0	1850–59	92
1860	99	91	107	98	97	90	111	100	99	101·4	1851–60	94
1861	102	91	96	97	91	92	109	99	98	99·9	1852–61	96
1862	98	86	98	94	91	123	106	107	101	100·9	1853–62	99
1863	87	85	99	89	93	149	101	115	103	101·1	1854–63	100
1864	79	89	106	88	96	162	98	119	105	100·9	1855–64	100
1865	84	97	97	91	91	134	97	108	101	100·3	1856–65	100
1866	95	96	94	95	91	130	99	107	102	100·5	1857–66	100
1867	115	89	94	101	87	110	100	100	100	99·7	1858–67	99
1868	113	88	96	100	85	106	102	99	99	99·6	1859–68	100
1869	91	96	98	94	89	109	100	100	98	99·6	1860–69	101
1870	88	98	95	93	89	106	99	99	96	99·6	1861–70	100
1871	94	100	100	98	93	103	105	101	100	99·7	1862–71	100
1872	101	101	104	102	127	114	108	115	109	99·2	1863–72	101
1873	106	109	106	107	141	103	106	114	111	97·4	1864–73	102
1874	105	103	105	104	116	92	96	100	102	95·8	1865–74	102
1875	93	108	100	100	101	88	92	93	96	93·3	1866–75	101
1876	92	108	98	99	90	85	95	91	95	86·7	1867–76	101
1877	100	101	103	101	84	85	94	89	94	90·2	1868–77	100
1878	95	101	90	96	74	78	88	81	87	86·4	1869–78	99
1879	87	94	87	90	73	74	85	78	83	84·2	1870–79	97
1880	89	101	88	94	79	81	89	84	88	85·9	1871–80	96
1881	84	101	84	91	77	77	86	80	85	85·0	1872–81	95
1882	84	104	76	89	79	73	85	80	84	84·9	1873–82	93
1883	82	103	77	89	76	70	84	77	82	83·1	1874–83	90
1884	71	97	63	79	68	68	81	73	76	83·3	1875–84	87
1885	68	88	63	74	66	65	76	70	72	79·9	1876–85	85
											1877–86	82

Table of Average of Index Numbers (Per-centages), 1867–77 = 100.

Periods.	Corn, &c.	Meat and Butter.	Sugar, Coffee, and Tea.	Total Food.	Minerals.	Textiles.	Sundry Materials.	Total Materials.	Grand Total.	Silver.*
1818–27	109	90	151	111	128	105	106	112	111	98†
1828–37	95	78	127	96	97	94	92	91	93	98†
1838–47	102	80	122	99	93	82	93	90	93	98
1848–57	95	79	87	88	93	80	94	89	89	100
1858–66	91	89	100	92	94	117	103	105	99	100·9
1867–77	100	100	100	100	100	100	100	100	100	96·4
1878–85	82	99	79	88	74	73	84	78	82	84·1
1885	68	88	63	74	66	65	76	70	72	79·9
1853–77	100	93	99	97	100	104	103	102	100	99
1848–52	80	72	78	77	77	72	79	76	76·4	99

* Silver compared with 60·84*d.* per oz., being the parity between gold and silver at 1 : 15½.
† Silver 1818–37, approximate value.

(B.) PRINCIPAL ARTICLES, FOOD, and RAW MATERIALS according to FIGURES published in the STATISTICAL SOCIETY'S JOURNAL.

—		Prices.			Index Nos., 1885.		Values of Imports and Home Production.	
		Average, 1853–77.	Average, 1867–77.	1885.	1867–77 = 100.		Mill. £ and dec. altered to 1885 Level.	Mill. £ and dec., average Quantities of 1883–85 at average values of 1867–77.
Wheat, English	qtr.	*s.* 54	54½	32¾	60	61	45·32	74·30
„ American	„	„ —	56	35	62			
Flour, town made, white	280 lbs.	„ 46½	46	29	63		—*	—*
Barley, English	qtr.	„ 37	39	30	77		20·48	26·60
Oats „	„	„ 25	26	20½	79		25·60	32·40
Maize, American, mixed	„	„ 33⅓	32½	23	71		7·81	11
Potatoes, good English	ton.	„ 108	117	75	64		18·05	28·20
Rice, Rangoon (or Madras)	cwt.	„ 10¼	10	7	70		2·45	3·50
Beef, prime	8 lbs.	*d.* 53	59	52	88		39·95	45·40
„ middling	„	„ 45⅓	50	44	88			
Mutton, prime	„	„ 58⅓	63	56	89	87	17·31	19·90
„ middling	„	„ 51⅔	55	47	85			
Pork, large or small	„	„ 51	52	45	87	89	19·74	22·40
Bacon, Waterford	cwt.	*s.* 69⅓	74	68	92			
Butter, Friesland, fine	„	„ 117	125	111	89		20·74	23·30
Sugar, West Indian, refining	„	„ 23¼	23	13½	59	61	18·42	30·20
„ beet	„	„ —	24	14¼				
„ Java	„	„ 29¼	28⅓	17⅔	62			
Coffee, plantation (low middling)	„	„ 76	87	60	65		3·06	4·70
„ Brazil (good)	„	„ 58	64	39				
Tea, Congou, common	lb.	*d.* 11¾	11¼	6½	64		9·92	15·50
„ average import price	„	„ 17¼	17¼	12				
Iron, Scotch pig	ton.	*s.* 64	69	42	60		16·02	26·70
„ bars	„	£ 8	8¼	4⅞	59		—	—
Copper, Chili, bars	„	„ 87	75	43	57		4·16	7·30
„ English tough cake	„	„ 96	81	47	—		—	—
Tin, Straits	„	„ 112	105	87	83		3·07	3·70
Lead, English pig	„	„ 21½	20½	11⅝	57		1·71	3
Coals, Wallsend Hetton, in London	„	*s.* 20½	22	16½	75	74	54·83	74·10
„ average export price	„	„ 10¾	12½	9	72			
Cotton, middling Uplands	lb.	*d.* 10 7/16	9	5⅝	62	62	35·59	57·40
„ fair Dhollerah	„	„ 7 15/16	6¾	4¼	63			
Flax, Russian	ton.	£ 49	47	34½	73		3·80	5·20
Hemp, Manilla, fair	„	„ 38	43	35	82		2·05	2·50†
„ St. Petersburg clean	„	„ 36	35	29				
Jute, good medium	„	„ 19½	19	12	63		3·34	5·30
Wool, Merino, Pt. Phillip fleece	lb.	*d.* 21⅜	21¼	16¼	73	61	25·38	41·60
„ „ Adelaide grease	„	„ 10⅜	9⅞	6¾				
„ Lincoln half-hogs	„	„ 19½	19¾	9⅞	50			
Silk, Tsatlee	„	*s.* 22	23	12⅔	55		2·09	3·80
Hides, River Plate, dry	„	*d.* 9⅕	9	8¾	95	95	9·50	10†
„ „ salted	„	„ —	7	6½				
Leather, crop hides, 30–45 lbs.	„	„ 15¼	16	15	94			
Tallow, St. Petersburg Y. C.	cwt.	*s.* 48½	45	38	76		1·75	2·30†
„ town	„	„ 49	45	30½				
Oil, palm	ton.	£ 40½	39	30	77		1·16	1·50
„ olive	tun.	„ 53	50	39	78		0·94	1·20
„ linseed	ton.	„ 33	30	22	73		4·53	6·20†
Seeds, linseeds	qtr.	*s.* 60	60	44				
Petroleum	gall.	*d.* —	12½	6⅞	55		1·87	3·40
Soda, crystals	ton.	*s.* —	92	55	60		1·86	3·10‡
Nitrate of soda	cwt.	*s.* 15	14	10½	75		1·05	1·40
Indigo, Bengal, good consuming	lb.	„ 6¾	7¼	5¼	72		2·16	3
Timber, hewn	load.	„ 66	60	48	81		14·01	17·30†
„ sawn or split	„	„ 57	54	45				
45 commodities, Total			—	—	—	3,234	439·72	617·40
Average			—	—	—	71·9	71·2	100

* Included with wheat. † Imports only. ‡ Exports of Alkali.

(C.) Sundry Articles, Food and Raw Materials.

(Prices marked thus * are from market quotations; all other prices are from the Board of Trade Returns.

		Prices.		Index Nos., 1885.	Value of Imports or Exports.	
		Average, 1867–77.	1885.	1867–77 = 100.	1885, Actual Mill. £ and dec.	1885, altered to the Level of 1867–77.
Beer and ale, exported	brl. *s.*	79·07	75·34	95	1·65	1·74
Bones, except whalebone	ton £	6·42	5·92	92	0·44	0·48
Brimstone	cwt. *s.*	6·73	5·09	76	0·18	0·24
Bristles	lb. *d.*	37·08	33·92	92	0·42	0·46
Caoutchouc	cwt. £	9·82	11	112	1·98	1·77
Cheese	" "	2·93	2·22	76	4·07	5·35
Cocoa	lb. *d.*	6·65	8·43	127	0·82	0·65
Currants	cwt. *s.*	24·92	25·85	104	1·46	1·40
Cutch	ton £	21·55	21·42	100	0·56	0·56
Cochineal	cwt. "	13·34	6	45	0·09	0·20
Drugs, bark, Peruvian	" "	10·90†	6·83	63	0·87	1·38
" sulphate of quinine	oz. *s.*	7·50*	3·25*	43	?	?
" opium	lb. "	20·64†	12·85	62	0·46	0·74
Dyewood, logwood, Jamaica	ton £	5·36*	4·87*	91	0·53	0·58
Eggs	doz. *d.*	8·92	8·42	94	2·93	3·11
Feathers, ornamental	lb. *s.*	48·96†	39·78	81	1·50	1·85
Fish, imported	cwt. "	25·48	26·24	103	2	1·94
" herrings, exported	brl. "	28·69	24·55	86	2·02	2·35
Guano	ton £	11·41	9·70	85	0·25	0·29
Gutta-percha	cwt. "	8·35	6·45	77	0·35	0·45
Hair, goats'	lb. *d.*	32·60	15·91	49	0·95	1·94
Hops	cwt. £	4·50	3·75	84	1	1·19
Lard	" *s.*	55·70	36·88	66	1·61	2·15
Oil, cocoa-nut	ton £	40·25	29·78	74	0·28	0·37
" rapeseed	" "	39 *	25·75*	66	0·37	0·56
" sperm	tun "	92·60	47·62	51	0·08	0·16
" train	" "	35·22	26·52	75	0·45	0·60
" turpentine	ton "	30·18	25·16	83	0·39	0·47
Oil-seed cake	" "	9·18	7·18	78	2·03	2·60
Onions	bush. *s.*	4·43†	2·78	63	0·49	0·78
Oranges	" "	9·12	6·80	75	1·48	1·97
Quicksilver	bottle £	11·41*	6 *	53	0·33	0·62
Raisins	cwt. *s.*	34·51	32·68	95	0·97	1·02
Rags and paper-making materials — rags	ton £	17·13	13·16	77	0·47	0·61
Rags and paper-making materials — esparto, &c.	" "	7·46	5·98	80	1·79	2·24
Rosin	cwt. *s.*	8·66	4·83	56	0·32	0·57
Salt, exported	ton "	12·95	14·59	113	0·67	0·60
Saltpetre	cwt. "	22·60	16·82	74	0·27	0·36
Seeds, clover and grass	ton £	51·78	46·67	90	0·74	0·82
" cotton	" "	8·56	6·85	80	1·85	2·31
" rape	qtr. "	2·65	1·62	61	0·88	1·44
Silk, knubs or husks, and waste	cwt. "	15·19	12·73	84	0·68	0·81
Shellac	" *s.*	110 *	73 *	66	0·38	0·57
Shumach	ton £	16·07	14·61	91	0·16	0·18
Skins, goat	each *d.*	30·30	22·29	73	0·53	0·73
" seal	" *s.*	8·26	15·84	192	0·46	0·24
" sheep	" *d.*	27·02	29·12	108	1·03	0·95
Spelter	ton £	21·80*	14 *	64	0·85	1·33
Spices, cinnamon	lb. *d.*	24·61	8·82	36	0·06	0·17
" pepper	" "	5·20	7·35	141	0·97	0·69
" other sorts	" "	6·25	5·29	84	0·45	0·54
Spirits, brandy	gall. *s.*	7·05	8·93	127	1·24	0·98
" rum	" "	2·16	1·59	74	0·55	0·74
" other sorts	" "	1·69	1·82	108	0·35	0·32
Teeth, elephants', &c.	cwt. £	38·12	50·18	132	0·50	0·38
Tobacco, unmanufactured	lb. *d.*	8·27	7·92	96	3·85	4·01
Valonia	ton £	18·30	15·77	86	0·47	0·55
Wine	gall. *s.*	6·97	7·01	101	5·13	5·08
Wood, staves	load £	8·26	4·32	52	0·54	1·04
" mahogany	ton "	9·24	8·70	94	0·49	0·52
Yeast, dried	cwt. "	2·35	2·79	119	0·82	0·69
61 articles, Total		—	—	5175	59·51	69·44
Average		—	—	84·8	85·7	100

† Average of seven years, 1871–77 only.

(D.) Manufactured and Partly Manufactured Articles Exported according to Board of Trade Returns.

		Prices.		Index Nos., 1885. —	Values of Exports.	
		Average, 1867–77.	1885.	1867–77 = 100.	1885, Actual Mill £ and dec.	1885, altered to the Level of 1867–77.
Alkali	cwt. *s.*	9·25	5·87	63	1·96	3·11
Arms, fire-arms	each „	30·46	29·92	98	0·38	0·39
„ gunpowder	lb. *d.*	6·03	5·98	99	0·32	0·32
Bags, empty	doz. *s.*	7·70	4·37	57	0·78	1·37
Bleaching materials	cwt. „	9·78*	6·73	69	0·51	0·74
Books, printed	„ £	11·14	9·64	87	1·14	1·31
Cement	„ *s.*	2·59	2·20	84	0·8.	0·96
Candles	doz. lbs. „	8·22	6·14	75	0·20	0·27
Cordage and twine	cwt. „	56·54	43·31	76	0·38	0·50
Cotton yarn	lb. *d.*	17·46	11·58	66	11·87	18
„ piece goods, plain	yard „	3·40	2·33	68	30·57	44·96
„ „ printed	„ „	4·77	3·47	73	17·71	24·53
„ stockings and socks	doz. prs. *s.*	6·81	6	88	0·52	0·59
„ thread for sewing	lb. *d.*	41·28	37·74	91	2·37	2·60
Glass, plate	sq. foot *s.*	2·36	1·27	54	0·25	0·46
„ flint	cwt. „	55·14	42·51	77	0·28	0·37
„ common bottles	„ „	10·29	9·57	93	0·35	0·38
„ other sorts	„ „	28·71	16·65	58	0·09	0.13
Hats of all sorts	doz. „	30·03	21·34	71	1·11	1·56
Leather, boots and shoes	doz. prs. „	63·26	58·09	92	1·63	1·77
Linen, linen yarn	lb. *d.*	15·93	14·26	89	0·99	1·11
„ jute yarn	„ „	3·85	2·13	55	0·27	0·49
„ manufactures, white or plain	yard „	7·40	6·35	86	3·65	4·24
„ „ printed	„ „	8·31	6·87	83	0·21	0·25
„ „ sail-cloth	„ „	13·74	10·83	79	0·18	0·23
„ „ thread for sewing	lb. „	29·80	30·63	103	0·34	0·33
„ jute manufactures	yard *d.*	3·69	2·13	58	1·90	3·28
Metals, iron, bar, angle, bolt, and rod	ton £	9·27	6·13	66	1·62	2·43
„ „ railroad	„ „	9·46	5·47	57	3·90	6·84
„ „ wire	„ „	18·89	12·51	66	0·69	1·03
„ „ sheets and plates	„ „	13·66	8·13	60	0·91	1·52
„ „ galvanised	„ „	22·93	13·41	59	1·76	2·98
„ „ hoops	„ „	10·58	6·69	63	0·55	0·87
„ „ tinned plates	„ „	25·91	14·84	57	4·43	7·77
„ „ cast or wrought	„ „	16·09	11·53	72	4·01	5·57
„ „ steel, unwrought	„ „	33·59	16·99	51	1·03	2·05
„ „ manufactures of steel	„ „	63·27	31·43	49	0·41	0·83
„ copper, yellow metal	cwt. „	3·70	2·32	63	0·97	1·54
„ „ of other sorts	„ „	4·56	2·92	64	1·23	1·92
„ brass of all sorts	ton „	5·11	3·96	77	0·36	0·47
„ lead, pig, sheet, and pipe	„ „	21·31	12·25	58	0·47	0·81
„ zinc, wrought and unwrought	„ „	21·72	13·28	61	0·10	0·16
Oil and floor cloth	sq. yard *d.*	15·40*	13·03	85	0·61	0·72
Paper	cwt. £	2·94	1·95	66	1·43	2·14
Silk piece goods	yard *s.*	3·52	3·72	106†	1·12	1·06
Soap	cwt. „	26·12	23·50	90	0·47	0·52
Woollen and worsted yarn	lb. *d.*	35·67	24·19	68	4·38	6·44
„ cloths, &c.	yard „	38·32	40·23	105†	7·70	7·33
„ flannels, &c.	„ „	18·03	13·08	72	0·94	1·31
„ stuffs, &c.	„ „	12·61	9·35	74	7·74	10·46
„ carpets, &c.	„	36·62	25·74	70	1·19	1·70
51 articles, Total		—	—	3,751	128·79	182·72
Average		—	—	73·6	70·5	100

* Average of 1871–77 only.
† Higher average, probably on account of changes in the classification; prices have certainly fallen.

(E.) Summary of Results.

The following statement gives the result of the three tables (B, C, and D). As regards the value of sundry small articles, and of manufactured goods, the home production of the former, and the home consumption of the latter has not been included, as no sufficient data are available. The sum of 80,000,000*l.* has, however, been added for beer, spirits, and other articles, which are presumed to have fallen on the average only to a moderate extent, say 5 per cent., and it may fairly be assumed that any articles not comprised in these lists have, on the average, followed very much the same course as those given.

It will be seen that the average decline of all the 157 descriptions of commodities according to index numbers is 22½ per cent. as compared with the average of 1867–77; but allowing for quantities according to the importance of each article, it amounts to 26 per cent., which is only 2 per cent. less than that of the 45 principal commodities treated in the general tables.

	According to Index Nos.		According to Quantities.		
	Total Index Nos., 1885.	Average. 1867–77 = 100.	Value on the Basis of the Average Prices of 1867–77, Mill. £ and dec.	Value, 1885. Mill. £ and dec.	Ratio. 1885. 1867–77 = 100.
45 principal articles	3,234	71·9	617·4	439·7	71·2
61 sundry articles	5,175	84·8	69·4	59·5	85·7
Beer, spirits, &c.	—	—	84·2	80	95·
51 manufactured and partly manufactured articles.	3,751	73·6	182·7	128·8	70·5
157 articles	12,160	77·5	953·7	708	74·2
Average decline in 1885 as compared with 1867–77.	—	22·5 %	—	—	25·8 %

The index number for the 45 principal commodities in 1886 is only 69 (1867–77 = 100), and the ratio according to quantities only 68·1. The index number for silver is 74·6, or 25·4 per cent. below the former normal point. Taking all the above 157 articles together and allowing for quantities the fall in 1886 as compared with 1867–77 will amount to 29 per cent.

APPENDIX V.

Papers put in by Mr. Barbour.

(A.) *See* Question 1136.

The silver remittances from treasuries in the plains to Simla and Kasauli (a sub-treasury of Simla) during the last 25 years have been as follows:—

	Rs.
1861-62	12,10,000
1862-63	18,34,500
1863-64	20,70,000
1864-65	26,65,000
1865-66	25,04,000
1866-67	16,88,400
1867-68	27,35,500
1868-69	23,82,000
1869-70	21,77,000
1870-71	24,15,950
1871-72	19,75,200
1872-73	22,62,000
1873-74	19,67,000
1874-75	19,12,000
1875-76	27,97,000
1876-77	24,72,000
1877-78	36,23,000
1878-79	44,10,000
1879-80	37,90,000
1880-81	32,93,000
1881-82	32,00,100
1882-83	32,88,200
1883-84	41,15,000
1884-85	31,48,000
1885-86	24,68,000
Total	6,64,02,850

The amount of silver brought to Simla, otherwise than in remittances on account of Government, may be neglected. European and native bankers and traders replenish their resources when necessary by currency notes, which the Simla Treasury is always prepared to cash.

The amount of silver brought by visitors is insignificant. Remittances of coin to the plains are never made, either by Government, or bankers, or merchants. Remittances are made either by currency notes or by treasury bills on Bombay, Calcutta, Umballa, Lahore, and Delhi, which the treasury is always prepared to grant. The currency notes supplied to the Simla Treasury during the last three years have been—

	Rs.
1883-84	8,34,000
1884-85	13,45,000
1885-86	15,41,000

The treasury bills issued by the Simla Treasury during the last three years have been—

	Rs.
1883-84	7,80,700
1884-85	14,75,400
1885-86	19,69,500

The aggregate of these notes and bills represent remittances on account of banking, trading, &c. made to the plains.

A portion of the silver sent to Simla by Government eventually returns to the plains. The Simla market is supplied with cattle, grain, and miscellaneous supplies largely from the plains. A large portion of these supplies is brought by itinerant dealers, who take back cash with them for fresh purchases in the villages where currency notes would not be accepted. I have not been able to procure any satisfactory information from the Simla octroi returns, as it is impossible to make any accurate distribution of the amount of business done by large dealers, who would not remit cash, and by itinerant traders with small capital, who would take back cash. Most of the grain supply of Simla is brought up by zamindars from Ludhiana and Ferozepore, who take back coin. The retail grain dealers are mostly Hoshiarpore and Kangra men, who come to Simla for the season, and are believed to take back their profits in coin. The cost of carriage of supplies is also considerable, and nearly all of it is taken back in cash. So are the savings of carpenters, masons, and domestic servants from the plains. Looking to the class of people who take back coin, and to the fact that it is certainly not taken in large quantities at a time, I do not think that it can exceed one third of the amount sent to Simla by Government, or about 11 lakhs yearly. Applying this to the results of the past six years, it may be taken that the present annual absorption of silver by the hill population is about 22,00,000 a year. This result is the more curious when it is considered how sparse the hill population is, and that the Thibet traders ordinarily take back grain and not silver. I think that the hill population is acquiring wealth rapidly. It is certain that many of the hill Rajas, notably those of Rampore, Busahir, and Bilaspore, have accumulated large stores of silver; and it cannot have escaped observation how the fact of growing wealth is reflected in the amount of silver and gold ornaments now worn by hill women. It is nearly 10 years since I first came to Simla, and the change in this respect in that period is sufficiently striking.

	Rs.
1880-81	32,93,000
1881-82	32,00,000
1882-83	32,88,000
1883-84	41,15,000
1884-85	31,48,000
1885-86	24,68,000
	3)1,95,12,000
	65,04,000
	6)1,30,08,000
	21,68,000

(Signed) E. J. SINKINSON,
Accountant General, Punjab.

Simla,
2nd October 1886.

(B.) *See* Question 1145.

LETTER ON THE SUBJECT OF THE HOARD OF THE MAHARAJAH OF BURDWAN.

Bun Abash, Burdwan,
16th September 1886.

MY DEAR ....., IN reply to your letter of day before yesterday's date, I have the pleasure to send the following information that I have been able to procure. It is very difficult to answer all the questions satisfactorily.

Through fear that the Marhattas might take away whatever they found in the house, and that the householders would have nothing to fall back upon, it was thought necessary in those days to keep a large amount of savings under ground for the time of need. Besides, in the time of the Mogul Emperors, the country was not so safe as it is now-a-days under the British rule, and there was no other way of investment than buying landed property, precious metals, jewels, &c.

So they used to have large sums in cash, and also because the people of those days did not have the same confidence in the Government of the country as they have now; they preferred keeping their savings in hard cash within easy reach, and in the shape of precious stones and metals.

Ladies of the Hindoo household were, as a rule, uneducated in those days (and the majority of them are still no better), and for their benefit it was not thought proper to invest in securities, as when there was no male member in a family, it would be hard for the uneducated ladies to deal with the securities or other investments which might necessitate their appearing in court and undergoing some expenses to get their just dues from the court, in addition to the degradation they would have to submit to.

Another reason why people (especially poorer people, who cannot save more than 100 or 200 rupees, and have some ornaments) like to leave for their wives and families behind them hard cash and ornaments, is that they cannot afford to have iron safes or strong boxes to keep their money in in the shape of currency and promissory notes. They generally put their things within *brass lotas* or *Bahugunas*, and then bury them under ground somewhere in the room they sleep in; as a rule they prefer the ground below their beds for that purpose.

With reference to the description of the several treasure houses in the estate, their dimension, and their contents. There are three rooms which are known by the name of *Toshakhana*—

(*a.*) One large room measuring about 48 feet in length, 14′ 6″ in breadth, and 13′ 9″ in height, where gold and silver ornaments and ornaments set with precious stones are kept. These articles are kept in almirahs and boxes of all descriptions, and also some gold plates and cups, *Thalees* and *Katorahs* as well as washing bowls, jugs, &c.

(*b.* There is another room where silver *Thalees* and *Katorahs, Rakabees, aterdan, golappas, nemokdan,* glass cups,* *gharras, lotas,* washing sets and all other things for ordinary use are kept, the room measuring L-17-9, B-15-6, H-13-9.

(*c.*) There is a third room where silver plates and dishes, forks, spoons, silver-handled table knives, tea sets, &c., are kept (English dinner and breakfast sets), measuring about L-15, B-10-6, H-13-9.

The rooms marked (*a*), (*b*) are under lock, and the doors of the rooms having been bricked up, and we having no list to show what they contain, I cannot give an idea as to the value of the contents. Of the contents of the latter room we have made an inventory, and they would come up to about 80,695 tolahs of silver, valued at Rs. 80,695.

There are four other rooms :—

(*a.*) One of these has been lately fitted up since the estate came under the court, and contains gold and silver ornaments, and ornaments set with precious stones, gold ornaments and throne, &c., would come up to about 10,142 tolahs valued at Rs. 1,62,278 (at the rate of 16 rupees per tolah). The room is about L-6-6, B-12-9, H-12-3.

(*b.*) The second and the third rooms (known as the under roker room or reserve treasury. One for the zamindari property and another for Debutter) are the treasury where current collection of the estate is kept as well as the Government securities and debentures (the size of the zamindari treasury is L-22-9, B-12-9, H-12-3, and that of the Debutter treasury is L-6-9, B-15, H-12-3).

(*c.*) The fourth room measures about L-22-6, B-15, H-12-3, where there are two large sized vaults prepared for hoarding the current silver coin, and since the year (1267, B.C.) some money was from time to time put in and taken out by the Maharajah Mahtab Chund Bahadoor, for the expenses of emergent and extra-ordinary nature, such as the late Maharajah Aftab Chund Bahadoor's marriage, Lala Bun Behari Kapur's marriage, and buying landed properties. When he died about one lakh was left in one of the vaults. In the time of Maharajah Aftab Chund Bahadoor that sum was taken out and placed at the reserve treasury, so there is no money in them now. There is one small vault in the room supposed to have contained some 9,990 or 10,000 gold mohurs of all descriptions, one kind known as *Joypoori*, another *Moorshidabadi*, and sovereigns worth in all about Rs. 1,60,000. The accumulation of these coins was begun by the Maharajah Tage Chund Bahadoor, and continued up to the time of the Maharajah Mahtab Chund, who made this vault and kept them in it; this room has also been locked, and the door is bricked up; this room is known as the *Kona Hawze*. All these above treasure rooms are situated in the apartment known as "Raj Mohal," at present occupied by the Maharanee.

(*d.*) There is one toshakhana situated in another apartment called "Rung Mohal," where ornaments belonging to different gods of the family are kept, and silver *Thalees, sapaias, &c.*, for the religious purpose, the value of which is not known to us, as it is one of those rooms that have been locked up and sealed.

(*e.*) *Bara Hawze*, or the room which contains several vaults, is situated in the apartment called *Jattrakhanda*, measuring about L. 32, B. 25, H. 12-9. As this room is locked up and its doors are bricked up, and I do not remember how many vaults there are in the room, and how much money in silver they contain, I am sorry I cannot give you any information on these heads.

The amount known to have been drawn from these vaults during the times of the Maharajahs Mahtab Chund and Aftab Chund Bahadoors is about Rs. 23,00,000 and out of this sum about Rs. 10,75,000 has been invested in landed properties, Rs. 5,00,000 in Government securities, and Rs. 200,000 in Himalayan Railway Debentures.

It is believed that these silver coins were hoarded by the Maharajah Tej Chund Bahadoor and his wife Maharanee Komul Coomari, Thacorance, after him year after year, beginning from (1211, Bengali era) that is from the time when the puttoni system was first introduced. According to the custom of the Burdwan Raj family the custody of these valuables was left to the Maharanee for the time being, but the vaults were never opened except in the presence of the Maharajah.

When any sum was drawn out, only some relations and trustworthy servants were admitted into the room and vault. Treasurers and Dewans used to be present outside the room or apartment, where the sum drawn was sent out (female guards being placed in the passage) for the purpose of weighing, counting, and bagging it before it was sent to the Mint.

A part of the above-mentioned gold coins and all the silver coins bear as date the 19th year of Shaha Alum's reign. They were all coined at Moorshedabad.

I hope, in conclusion, that though I have not followed the question in due order, I have given exhaustive answers to them, all which I hope you will find useful, in spite of the rambling way in which they have been put.

Yours sincerely,

* Silver vessels shaped like ordinary drinking glasses appear to be meant.

(C.) *See* Question 1147.

EXTRACT FROM A REPORT OF 5TH OCTOBER 1886 BY PANDIT SALIG RAM, OF THE POSTAL DEPARTMENT.

A very remarkable case of this gold-hunger came to my notice in the course of my inquiries in * * * * * district, and I think I may safely mention it here, as there seems to be no fear of this memorandum being ever published. I was told on the most reliable authority that His Highness the * * * * * of * * * * * has set apart a very large sum of money (in silver) for conversion into gold, and that every month between 40 and 45 thousand rupees' worth of gold mohurs are purchased by agents in Calcutta, Bombay, and certain other places, and sent to the * * * * That this has been going on for some years. A certain proportion of this gold comes by post. But parcels are very seldom addressed to the * * * * * or directed to * * * * * *. The * * * * * treasurer is a native banker of * * * * * *, and the parcels usually come to his address at * * * * *. The gold received is taken to * * * * *, and there deposited in a strong treasure vault or room specially set apart for it. If inquiries are made at * * * * *, the above statement will probably be contradicted, but I have not the least doubt of its correctness. Who can say that the * * * * example is not being followed by rich men all over the country? If inquiry were made, it will most probably be found that this is really the case; but the mischief which such an inquiry will cause, by exciting distrust and suspicion of the real intentions of the Government, will be serious, and should not, I think, be risked without urgent reasons, and then only with great caution.

(D.) *See* Question 1150.

STATEMENT showing the AMOUNT of NATIVE COINS and ORNAMENTS tendered for coinage in the BOMBAY MINT from 1854–55.

Years.	Native Coins.	Ornaments.	Total.
	Rs.	Rs.	Rs.
1854–55	15,81,000	4,69,000	20,50,000
1855–56	10,58,000	2,31,000	12,89,000
1856–57	3,13,000	2,23,000	5,36,000
1857–58	2,02,000	50,000	2,52,000
1858–59	4,48,000	15,000	4,63,000
1859–60	2,25,000	2,24,000	4,49,000
1860–61	1,27,000	2,49,000	3,76,000
1861–62	1,53,000	12,22,000	13,75,000
1862–63	49,000	47,000	96,000
1863–64	37,000	1,63,000	2,00,000
1864–65	2,000	—	2,000
1865–66	74,000	—	74,000
1866–67	3,36,000	—	3,36,000
1867–68	19,75,000	1,53,000	21,28,000
1868–69	19,23,000	1,65,000	20,88,000
1869–70	20,18,000	1,76,000	21,94,000
1870–71	20,74,000	72,000	21,46,000
1871–72	10,88,000	12,50,000	23,38,000
1872–73	15,73,000	28,80,000	44,53,000
1873–74	23,96,000	12,17,000	36,13,000
1874–75	7,90,000	3,63,000	11,53,000
1875–76	7,10,000	75,000	7,85,000
1876–77	20,000	8,52,000	8,72,000
1877–78	—	1,24,00,000	1,24,00,000
1878–79	67,00,000	1,16,00,000	1,83,00,000
1879–80	45,00,000	92,00,000	1,37,00,000
1880–81	25,50,000	10,00,000	35,50,000
1881–82	1,00,000	4,00,000	5,00,000
1882–83	15,50,000	50,000	16,00,000
1883–84	1,25,000	50,000	1,75,000
1884–85	16,25,000	18,75,000	35,00,000
1885–86	2,00,000	3,25,000	5,25,000

(E.) *See* Question 1162.

PAY OF POSTAL RUNNERS IN INDIA FROM 1855 TO 1885.

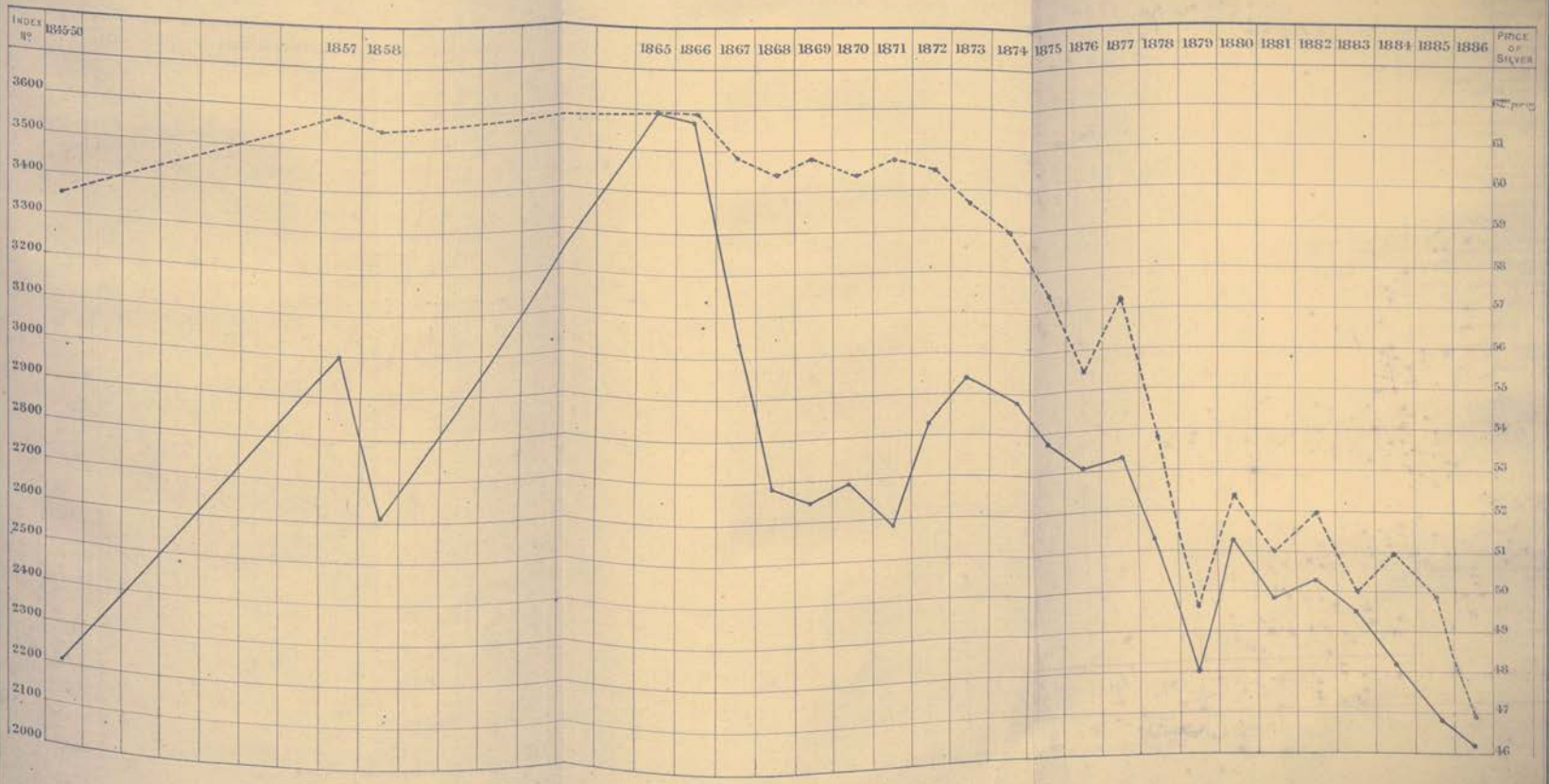
Names of Lines.	1855.	1860.	1865.	1870.	1875.	1880.	1885.	1886.
BENGAL.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Balasore to Cuttack	4 0	4 0	3 0	5 0	5 0	{ 6 0 / 5 0 }	5 0	5 0
Dacca to Chittagong	4 0	4 0	4 0	5 0	5 0	5 0	6 0	6 0
Cuttack to Angool (or Sumbalpur).	—	3 0	5 0	5 0	5 0	5 0	5 0	5 0
Purulia (Manbhoom) to Chyebassa.	5 0	4 0	4 0	4 0	4 0	3 8	4 8	4 8
Gya to Nowada	4 0	4 0	4 0	4 0	4 0	—	—	—
Mozufferpur to Purneah	3 0	3 0	3 8	3 8	3 8	4 0	5 0	5 0
Ranchi to Palamow	2 0	4 0	4 0	4 0	4 0	4 0	5 0	5 0
OUDH AND NORTH-WESTERN PROVINCES.								
Lucknow to Sitapur	4 0	4 0	4 0	4 0	4 0	5 0	4 0	4 0
Budaon to Bareilly	3 0	4 0	4 0	4 0	4 0	4 0	4 0	4 0
Etawah to Manipuri	4 0	4 0	4 0	4 0	4 0	4 0	—	—
Moradabad to Bijnur	3 0	4 0	4 0	4 0	4 0	4 0	4 0	4 0
PUNJAB.								
Delhi (to all places)	4 0	4 0	4 0	5 0	5 0	5 0	5 0	5 0
Jullundur to Hoshiarpur	4 0	4 0	4 0	4 0	5 0	5 0	5 0	5 0
Kohat to Bannoo or Edwardesabad.	4 8	4 8	4 8	5 0	5 0	5 0	5 0	5 0
Dehra Ghazi Khan to Dehra Ismail Khan.	4 8	4 0	4 0	5 0	5 0	5 0	5 0	5 0
SIND.								
Hyderabad to Mohad Khans Tando.	5 0	5 0	5 0	4 8	6 0	6 0	7 0	7 0
Jerruck to Tatta	—	—	7 0	7 0	7 0	7 0	7 0	7 0
BOMBAY.								
Ratnagiri to Vingorla	—	5 0	6 0	8 0	7 0	7 0	7 0	7 0
Hubli to Harrihar	5 0	4 0	6 0	8 0	7 0	7 0	—	—
Dhulia to Shirpur	5 0	5 0	6 0	8 0	7 0	7 0	6 0	6 0
CENTRAL PROVINCES.								
Jubbulpur to Mandla	5 0	—	5 0	—	5 0	5 0	5 8	5 8
MADRAS.								
Calicut to Tellichery	4 0	4 0	5 0	7 0	{ 7 0 / 6 0 }	7 0 / 6 0	7 0 / 6 0	7 0 / 6 0
Vizagapatam to Berhampur Ganjam.	—	3 12	5 0	6 0	6 0	6 0	6 0	6 0
MYSORE.								Moiety pay.
Bangalore to Mysore	4 0	4 0	4 0	5 0	6 0	6 0	—	2 4
Average (annas)	4·05	4·56	4·95	5·17	5·14	5·24	5·42	5·38

(Signed) W. ALPIN,
Officiating Comptroller, Post Office.

(F.)

DIAGRAM SHOWING PRICES OF COMMODITIES (ACCORDING TO THE "ECONOMIST" INDEX NUMBERS,) AND THE PRICE OF SILVER.

See Question 1177.



This Diagram shows the course of English prices, according to the Index Nos. of the "Economist," and also of the gold price of silver, from 1845-50 to 1885.

The dotted line represents the prices of silver and the continuous line the Index Nos.

It will be observed:

(1.) That down to 1873 the fluctuations in the price of silver were comparatively trifling. (2.) That since 1873 the fluctuations in the price of silver have been very great, and (3.) That the price of silver and the price of commodities in England rise and fall together.

APPENDIX VI.

MEMORANDUM by PROFESSOR ROBERTS AUSTEN, F.R.S., Chemist to the Royal Mint, on the Cost of Production of Silver.

There is some conflict of opinion as to the exact influence on the price of silver of the actual outlay involved in obtaining it from the earth, in the metallurgical operations incidental to its extraction from the ore, and in placing it upon the market.

M. Cernuschi indeed says "that the cost of production "does not determine the value of gold and silver; that "value is determined by two elements—the employment and the quantity." On the other hand, the late Mr. Bagehot* maintains "that the value of gold and silver is deter- "mined by the cost of production, just like that of all "other things; that in their case, as in all other cases, "what is more cheaply produced than usual would be "more plentifully produced than usual, and that the pur- "chasing power in consequence will be no doubt less." He elsewhere observes,† in discussing the Report of the Select Committee on the Depreciation of Silver (1876), that the price at which silver will settle down will in part "be determined by the cost in the *least* good mine "which pays to keep at work."

The difficulties of an inquiry as to the actual cost of production are considerable, and arise from—

(1.) Varying conditions in different localities.

(2.) Irregularity and incompleteness of returns, and the indifference or reluctance of proprietors to publish ful statements as to cost.

It is, moreover, very difficult to estimate the amount that should be added to the actual cost of mining and milling in consideration of the price paid for and capital invested in mining property.

The question as to whether the search for silver and its actual production does or does not afford a remunerative return for the capital expended on it has not been considered here. An attempt has simply been made to point out what are the several metallurgical processes by which silver is extracted, to collect such statements as are published dealing with cost of production, and to state the results for each of the principal processes; it being necessarily assumed that the data so collected admit of application to the *total* amounts of silver estimated to be produced by each of the respective processes. Sufficient allowance has, it is believed, been made for the cost of mining and transport.

The uncertainty attending any generalization as to the precious metals is indicated by the fact that, in 1875, the Director of the United States Mint, after a most careful examination of all the conditions likely to arise, gave it as his opinion that the "total production of all the mines on "the Cornstock may safely be estimated at not less than "50,000,000 dollars per annum, about 45 per cent. of "which will be gold." In 1884, however, when I visited the district, the mining and milling works were suspended. In the report to which reference has just been made the late Dr. Linderman observed of the mining and metallurgy of California, "The business is one of uncertainty and "hazard, and, taking one year with another, the expenses "no doubt equal, if they do not exceed, the production."

In previous official investigations but little attention appears to have been paid to the influence of the cost of production on the market price of silver; thus, the evidence upon this point given before the Select Committee on the Depreciation of Silver (1876) is practically limited to the statement of Mr. Pixley's belief‡ that silver is got out in certain mines in Mexico "at about 1*s.* 6*d.* an ounce," and to the expression of Mr. Bagehot's opinion, already quoted, as to the price being regulated by the cost of production under the most difficult circumstances.§

The following table gives the total production of silver in the world for 1883, that being the latest year for which complete returns are available:—

TABLE I.

	Ounces.
United States of America	35,737,908
Mexico	22,872,732
Germany	7,417,642
Austria	1,568,562
Spain	2,395,481
Argentine Republic	325,045
Colombia	587,873
Bolivia	12,376,860
Chile	4,119,125
Other countries producing less than 300,000 ounces	953,505
Total	88,354,733

Table II. gives the estimated amount of the silver extracted by each of the principal methods. The approximate cost of the mining and metallurgical operations involved will be given subsequently.

TABLE II.

Section.	Method by which the Silver was obtained.	Weight in Ounces.
I.	Refining of native gold	508,000
II.	Desilverization of lead	30,726,000
III.	Desilverization of copper and cupriferous products.	7,200,000
IV.	Treatment of silver ores	49,920,733
	Total	88,354,733

The metallurgical processes involved in the extraction of silver from its ores, although very complex, nevertheless admit of being classified in the four sections shown in the preceding table. The amounts into which the whole annual production is divided, as given in the third column, can only claim to be rough approximations. The reasons for the adoption of the figures given in this column will now be considered in some detail.

Section I.

Such silver as forms a natural alloy with gold being extracted in conjunction with that metal, and the deposit in which both metals occur being worked for gold, the extraction of the silver entails, practically, no expense over and above that which is involved in the extraction of the gold, as the silver is obtained incidentally. It would usually be necessary to purify the gold to convert it into ingots of the standard fineness met with in the market, and the cost of such parting and refining is the utmost metallurgical cost involved in the production of the silver. As this amount has to be distributed between the silver and the gold it is safe to assert that the extraction of one ounce of silver contained in gold does not exceed the cost of parting. The average official charges of the American mints for parting and refining silver and gold of the average standard of native gold is about 2½*d.* per ounce. The quantity of silver present in native gold varies considerably; but it has been estimated by King * that the mean fineness of the native gold of the United States is 876 parts in 1,000, and this may be taken as the average fineness for native gold generally. The alloying element is, in nearly every instance, silver, with but small quantities of copper and other metals, and these may be disregarded. Every 1,000 parts of native gold yield, therefore, 124 parts of silver. The total quantity of gold produced throughout the world in 1883 is estimated at 4,548,550 ounces.† of which 1,451,250, or nearly one-third, were produced in the United States. Nine per cent. was‡ derived from the refining of lead. Allowing an additional 1 per cent. to have been derived from cupriferous and other materials treated otherwise

* "Economist," March 4, 1876.
† "Economist," July 15, 1876.
‡ Report from Select Committee on Depreciation of Silver, 1876, question 213; *see also* question 230.
§ Ibid., question 1436.

* Rowie—Practical Treatise on Hydraulic Mining, p. 291.
† Mineral Resources of the United States for 1883-84, p. 320.
‡ Ibid., p. 413.

than by lead, but by processes not involving the use of mercury, there remains 90 per cent. as native gold * in one form or another. Assuming this to have been originally of the fineness above stated, it would have yielded as a bye-product 161,960 ounces of silver; calculating the total production of gold in the world on the same basis, the amount of silver obtained from it would be 507,618 ounces.

Section II.

A large proportion of the silver produced in the world is derived from association with lead ores, from which it is extracted by suitable treatment. Certain argentiferous materials are also melted with lead ores, the precious metal being in all cases collected in the lead so produced. The reduction of the silver occurring in lead ores will be effected without any extra cost beyond that requisite for the lead itself, provided that the state in which the silver is present does not necessitate any modification of the treatment demanded for the extraction of the lead alone, and this also holds good with respect to such silver ores as are added to the furnace charge, except that in this case it may be necessary to use more flux, and, consequently, more fuel and labour will be required. With these exceptions, the sole cost of the extraction of the silver from these argentiferous ores is connected with its separation from the lead produced. This is done either by crystallising out lead poor in silver from a richer alloy—the Pattinson process—or by the use of zinc—the Parkes process—or by these processes jointly. The cost of refining and desilverising the ton of argentiferous lead at Chicago in 1883 was, in the case of the Horn Silver Mining Company's lead, about 8 dollars per ton.† If, therefore, the lead be the main object of the smelting, and the silver merely a valuable bye-product, the amount of silver which must necessarily be present in the lead to pay for the cost of extraction must be of the value above stated, as in the case of the galena produced in the United Kingdom, which averages about 8·5 oz. silver per ton of lead.‡ When, however, as is usually the case, the production of lead is not the main, but rather a secondary, consideration, the above data are not applicable. This is more especially true with regard to those countries where the mines are situated far from the market or from deposits of fuel, with inefficient means of transport, and where labour and other expenses are high. Lead, in countries such as these, would not, by itself, pay to produce, and consequently ceases to be the main object of the mining and smelting operations, for the lead becomes the bye-product which serves primarily as a vehicle for the collection of the precious metals in the ores. These considerations are specially applicable as regards the American continent. At the date of publication of the "Mineral Resources of the United States for 1883–84," of the total quantity of argentiferous lead which had been desilverised in 1884, 119,965 tons, returns had been received which related to 117,608 tons. From this quantity had been obtained 21,505,248 ounces of silver and 146,830 ounces of gold. A certain proportion of this was derived from silver ores worked by lead smelters, but it is estimated § that fully 19,000,000 ounces of silver and 125,000 ounces of gold were obtained from the lead ores produced in the Rocky Mountain states and territories.

Owing to the small number of mines which are directly connected with smelting works, and to the want of published information as to cost, it is difficult to estimate the expense of mining and reducing these silver-lead ores, but in the report already referred to, two instances are given which would appear to be fairly typical. In the first case, that of the Horn Silver Mining Company, Utah,‖ the ore produced was comparatively rich, and the cost of production was about 100 dollars per ton of argentiferous lead.

The detailed cost was as follows:—

	Dollars.
Cost of mining -	17·25
,, smelting -	48·43
,, desilverizing	7·95
,, freight -	18·00
	91·63

It would probably be safer to take the cost of the ton of argentiferous lead at 100 dollars.

From a comparison of such other statements as to cost of production as occur in these reports, it would appear that the cost of mining and smelting the ton of ore did not, on the whole, differ greatly from that of the Horn Silver Company. The ore produced, is, however, frequently much poorer, and in the case of the Eureka Consolidated Mining Company* the average amount of lead in the ore is about 10 per cent. At this mine and works the total cost per ton of argentiferous lead is as follows:—

	Dollars.
Cost of mining -	51·00
,, smelting -	138·20
,, desilverization and ,, freight -	59·37
Total -	248·57

Taking into consideration the poorness of the ore and the heavy cost for freight, it would appear that this expenditure of 250 dollars per ton is rarely exceeded. It would further seem fair to assume that the mean cost of extraction in the United States would be shown approximately by taking the mean of the costs at the two works $\frac{100+250}{2}=175$ dollars. The price of lead at Chicago in October last was 4·10 dollars per cwt., 82 dollars per ton, while silver sold at 98 cents the ounce. The cost of working the ton of argentiferous lead being taken at the above mean, 175 dollars, it is possible to calculate the amount of silver the lead should contain in order to meet this cost, and it will be found that each ton weight of argentiferous lead must contain 95 ounces of silver; the gross value will then be made up of—

	Dollars.
Value of silver -	93·1
,, ,, lead -	81·7
Total -	174·8

Thus, to admit of its being smelted, the ore should, on the mean, be of such a richness as to yield a lead containing 95 ounces of silver. To 117,608 tons of refined lead there were, however, 21,505,248 ounces of silver and 146,830 ounces of gold, so that each ton of argentiferous lead produced in the United States contained nearly 183 ounces of silver and 1¼ ounce of gold. Taking the relative weight of silver as 20 times that of gold—the present market value—the ton of argentiferous lead contained on the average over 200 ounces of silver. It need only have contained 95 ounces to cover the working expenses, so that, as regards argentiferous lead, the price of silver might have been less than half the market price and yet have entailed no loss on the working.

The 4,000 tons of lead produced in Mexico, South America, and Australasia may be fairly considered as having been of the average richness of the lead produced in the United States, and the cost of production may, without prejudice to the conclusions arrived at, be assumed to be the same.

The present cost of desilverizing the ton of rich lead at Freiberg amounts, as shown by results recently obtained,† to about 25*s.* per ton, or about 1*d.* per ounce of silver produced. Including the cost of refining, the expense of desilverization would still be well below 1½*d.*

Nearly the whole of the silver produced in Europe is obtained from the smelting either of lead or of copper. Of the former metal the production is about 337,000 tons; and of the latter about 77,000 tons.‡ It is evident, therefore, that the larger proportion of the silver produced must be due to the smelting of lead ores, and of such ores, &c. as are added to the lead smelting charge. With regard to the amount of silver produced in the treatment of copper ores, the quantity produced at Mansfeld,§ in Prussia, in 1884 from ores which yielded 12,774 tons of copper was 74,132 kilogrammes, about 186 ounces to the ton, and as the copper obtained at these works contains an unusually large proportion of silver, it is probable that the total quantity of silver found to be worth extracting from copper ores in Europe does not exceed twice the production of the Mansfeld works, say, 150,000 kilogrammes. Of this quantity probably some 10,000 kilogrammes were produced from copper ores treated in connexion with lead ores. The total quantity of silver produced in Europe amounted to about 388,000 kilogrammes. Subtracting from this the quantity estimated to be produced from copper ores by methods other than those connected with the use of lead, the quan-

* This includes all ores treated by mercury.
† Mineral Resources of the United States for 1883-84, p. 417.
‡ Mining and Mineral Statistics of the United Kingdom for 1885. p. 79.
§ p. 413 of the Report.
‖ Ibid., p. 417.

* p. 418 of the Report.
† Jahrbuch für das Berg-und Hüttenwesen in Königreiche Sachsen auf das Jahr, 1886, pp. 133-146.
‡ Von Ehrenwerth, Stahl und Eisen. Vol. VI., p. 752.
§ Zeitschrift für das Berg-, Hütten und Salinenwesen im Preussisch en Staate, 1885, p. 190.

tity is obtained which is produced in the smelting of this latter metal, 238,000 kilogrammes.

As to the relative cost of production in Europe and in the United States, it is evident that, owing to much cheaper labour, nearness to the market, and greater facilities for transport, the cost of production in Europe would be much less than it is in America, were it not that the mines, as a rule, are deeper and less rich. The lead ore produced in Europe is, as compared with that of the United States, comparatively poor in silver. In the United Kingdom the lead ores contain on the average about 8·5 ounces of silver to the ton of lead. In Spain* 331,164 tons of lead ore, of little value as regards silver, and 26,047 tons of argentiferous lead ore properly so called were produced. The quantity of silver contained in this latter may be estimated from the fact that the desilverization of 3,587 tons of lead gave 4,102 kilogrammes of silver, about 36 ounces to the ton. Some rich ore is, however, exported.

In Italy† 31,191 kilogrammes of silver were produced from the desilverization of 15,000 tons of argentiferous lead, about 67 ounces to the ton.

As in these two countries only native ores are treated the results are typical of at least a portion of the lead ores of the Continent. In Germany and Austria the lead ores are usually comparatively rich in silver, but foreign ores are also imported, and as the compositions of these are not stated, the results of the treatment of the native ores are not directly obtainable.

Thus, although the European lead ores are poorer in silver than those of the United States, cheaper labour and transport, and greater facilities for smelting, render it probable that while the cost of production may be considerably less than in the United States, it cannot well exceed it.

The cost of production of the ounce of silver obtained from the desilverization of lead ores is therefore about 2*s.*, and the total amount of silver produced from the smelting of lead ores is about:—

	Ounces.
United States - - -	21,890,000
Europe - - - -	8,036,000
Elsewhere - - -	800,000
Total - -	30,726,000

Section III.

Argentiferous Copper Ores.—The amount of silver present in copper ores is much less than in lead ores, and in the latter the precious metal is frequently the main object of the smelting, while in copper ores it is usually a valuable bye-product.

The quantity of silver present in copper ores varies greatly, and no statistics relating to the average amount are obtainable. That the amount derived from this source is comparatively small is evidenced by the fact that the cost of extraction of the silver from copper is much greater than from lead, and the quantity of copper produced annually is relatively small. The greater cost of extraction is forcibly shown in the case of the Oker Works, Germany.‡ The copper produced at these works is, by a metallurgical process, divided into two approximately equal portions, one of which contains 21 ounces of silver to the ton of copper, and the other 53 ounces. The first portion does not pay to treat, while the latter does. The cost of extraction of the silver may be taken to lie between the two, possibly a mean, 37 ounces, or, at 4*s.* per ounce, 7*l.* 8*s.* per ton of copper. This is, moreover, the cost per ton of copper at the Mansfeld Works§ and by the electrolytic process the expense will probably be about the same.‖ Other methods of treatment of argentiferous copper ores are more expensive, and the increased cost of labour, &c. in America and elsewhere would cause the mean cost of extraction to be higher than the above estimates. It is not probable, however, that it would be greater than 50 ounces, 10*l.*

With regard to the richness in silver of the materials treated, the silver obtained at Mansfeld is, as already stated, about 186 ounces per ton of copper; at Oker the quantity present was 53 ounces, and "bottoms," which are worth desilverizing in other parts of the world, generally contain at least this amount. The mean amount of silver present in the ton of copper desilverized may be taken to be somewhere between the 50 and the 186 ounces in the cases mentioned, probably nearer the former than the latter, and 100 ounces per ton may be taken as a maximum. The cost of extraction of the silver present in copper ores must, when these latter are treated together with lead ores, be but small, as the additional cost of smelting would be so, as would also be the extra cost connected with the purification, &c. of the lead. The cost of the silver produced by wet methods is somewhat more difficult to determine, but it is stated* that the cost of recovering the precious metals by the Claudet process is about 8*d.* per ton. The ores treated by this process in the United Kingdom in 1885 contained† a little over two grains of gold and about three-quarters of an ounce of silver per ton of ore. Gold being of the value of about 2*d.* per grain, the cost of extraction of the three-quarters of an ounce of silver also present was about 4*d.*, or at the rate of 5*d.* per ounce. The 328,000 ounces of silver obtained in this manner in Great Britain were mainly a bye-product, costing about 5*d.* per ounce to produce. This is not true, however, as regards silver obtained by other methods, but if the cost of production of the ounce of silver obtained by wet processes generally be placed at 1*s.*, this is probably a high estimate. As regards the cost of desilverization of the copper, or of the "regulus," produced during the smelting of copper by the dry way, this has already been estimated at one-half the value of the silver produced, or about 2*s.* per ounce. Next, as to the quantity of copper desilverized. The total quantity of copper produced in 1885 amounted to about 222,000 tons.‡ Of this quantity, 14,880 tons were produced in Great Britain from ores which had been treated, with a view to desilverization, by the Claudet process, the quantity of silver obtained being 328,000 ounces. Allowing an equal quantity of silver and copper to have been produced elsewhere by this and other wet processes (giving a total of, say, 650,000 ounces), and placing the amount desilverized by lead at 10,000 tons of copper, containing 50 ounces of silver per ton (producing 500,000 ounces), there remain about 222,000 − 40,000, or 182,000 tons, as the quantity of copper produced by the ordinary dry smelting processes. Now, considering the comparative poorness in silver of copper ores as compared with lead ores, and the necessity for an average contents of 50 ounces of silver per ton of copper, as previously estimated, to pay for the extraction, it is safe to assume, without prejudice to the final conclusions, that of this quantity not more than one-third was actually desilverized.

Supposing this amount to have been of the average richness estimated (100 ounces of silver per ton of copper giving $\frac{182,000}{3} \times 100$ or about 6,050,000 ounces of silver), the silver produced from copper ores and the cost in accordance with the data above given will be as follows:—

——	Annual Production of Silver.	Cost per Ounce.
	Ounces.	*s. d.*
From Copper ores desilverized by wet processes exclusively.	650,000	1 0
From Copper ores desilverized by lead.	500,000	
From Copper ores desilverized during the ordinary smelting of Copper.	6,050,000	2 0
Total - - -	7,200,000	Mean 1 11

Section IV.

Silver Ores.—These ores are of very varied composition, and when not treated in connexion with the smelting of lead or of copper are treated either by amalgamation or by wet methods. By far the greater quantity of the silver is obtained by the former of these, and as wet methods are, on the whole, not more expensive than amalgamation,§ they need not be separately considered. The quantity of silver thus produced is found by subtracting the silver obtained by the processes already considered from the total production, which will give 49,920,733 ounces. This amount is mainly produced on the American continent. The ores treated are mostly true silver ores, but in some cases other metals are present in such quantities as, in conjunction with a low yield of silver, to render their mining and metallurgical treatment possible, provided local conditions are favourable. The silver ores occurring in the State of California are both surface ores and ores obtained by deep mining. The cost of mining and milling the former is

* Estadestica Minera de España, 1884, p. 38.
† Annali di Agricoltura 1886, p. lx.
‡ Precious Metals in the United States, 1884, p. 661.
§ Precious Metals in the United States, 1883, p. 763.
‖ Fontaine: Electrolyse, p. 268.

* Precious Metals in the United States, 1883, p. 789.
† Mineral Statistics of the United Kingdom for 1885, p. 74.
‡ Estimated by H. R. Merton & Co., London.
§ See Stetefeldt: Comparison of amalgamation with Russell's lixiviation process. Precious Metals in the United States, 1883, p. 745.

about 6½ dollars per ton.* A good example of the cost of deep mining is given in the case of the "Bonanza King"† Mine, which is situated near the highest peak of the Providence Mountains. The mine is 520 feet deep, and the ore has to be hauled for a distance of two miles. The cost of mining, hauling, and milling the ton of ore was 25·7 dollars, and it yielded silver to the value of 179 dollars. The value of the silver ore treated in California varies from 50 to 500 dollars per ton, a great portion yielding in the mill over 100 dollars per ton.‡ As a considerable proportion was produced at a cost of only 6·5 dollars per ton, it is not probable that the mean cost of extraction exceeded that at the "Bonanza King," say, 25 dollars per ton.

Comparing these results with the numerous other instances mentioned throughout the annual reports of the Director of the United States Mint on the Production of the Precious Metals, 1883 and 1884, it would appear to be reasonable to accept these statements as giving approximately the average richness of the ore treated, and the cost of mining and milling.

The cost of the ounce of silver so produced was therefore about 1*s.*, corresponding to an expenditure of 25 dollars to obtain 100 dollars worth of silver.

In Mexico and South America cheaper labour tends to compensate for less efficient methods. Those in most general use are the Patio and Cazo processes. The cost of treatment by the Patio process has been variously estimated § at from 16 to 27 dollars per ton of ore, and by the Cazo at about 7 or 10‖ dollars. Adding to this the cost of mining, say, 7 dollars, the total cost per ton varies from about 14 to 35 dollars. The ore treated contains from a few ounces to several thousand ounces per ton, and it seems probable that 25 dollars per ton may be taken to be the average expenses, and, from a comparison of various estimates,¶ it seems probable that 70 dollars for yield, or somewhat less than the average of the United States, is not far from the truth.

The final conclusions as to the actual cost of production by each of the principal methods of extracting silver would, therefore, appear to be as follows, the figures relating to the amounts produced being, for the sake of clearness, repeated from Table II.:—

Section.	Fine Silver, in ounces.	Cost per ounce of fine Silver.
		s. *d.*
I.	508,000	0 2½
II.	30,726,000	2 0
III.	7,200,000	1 11
IV.	49,920,733	1 5
Total -	88,354,733	Mean 1 8

The mean cost of production of the ounce of fine silver was, therefore, about 1*s.* 8*d.*, corresponding to 1*s.* 6½*d.* per ounce standard.

General Conclusions.

It was stated at the outset of this inquiry that it was necessary to regard the data collected as to cost of production as applicable to the total amounts of silver estimated to be produced by each of the respective processes. It will therefore be well to examine the foregoing results as a whole with a view to determine what degree of confidence may be placed in the general conclusions.

Section I.

With regard to Section I., it may be safely assumed that the cost of extracting the whole of the 508,000 ounces of silver from native gold is not inaccurately represented by the 2½*d.* per ounce assigned to it. The amount so extracted constitutes, however, a very small proportion of the total production of silver.

Section II.

Section II., on the other hand, includes one third of the total amount, and it is not possible to obtain direct evidence as to the cost of production of the whole of these 30,726,000 ozs. It will be observed that the evidence mainly rests on the statements as to cost of production at two works in the United States. These produce between them one sixteenth of the total amount of silver classified under this section, and there seems no reason to doubt that they may be considered respectively to be typical of the maximum and minimum cost of production in the United States, which itself produces no less than two thirds of the total amount of silver comprised in this section. It may be added that the mean cost per ton of argentiferous lead, 175 dollars, is nearly three times the selling price of the argentiferous lead extracted in the United Kingdom.

Since the evidence was given, the report for the year 1886 of the Broken Hill Mine, Barrier Ranges, New South Wales, a mine of very considerable importance, has been published. It states that during the year the smelting of 10,397 tons of ore yielded 1,991 tons of lead and 871,665 ozs. of silver, at a cost, including mining charges, of 4*l.* 12*s.* 0½*d.* per ton of ore, or at the rate of 1*s.* 1*d.* per oz. of silver produced, if the lead be considered to be of no value. The cost of production will, it is stated, be considerably reduced.*

Section III.

The amount of silver produced annually in the treatment of copper ores is estimated at 7,200,000 ozs.; of this quantity, 6,050,000 ozs. were obtained during the ordinary smelting of copper ores, and 2,382,000 ozs. of this latter amount, or one third of the total, were produced at Mansfeld at a cost which is stated to be 9½*d.* per ounce. Of the remainder, 328,000 ozs. were produced in Great Britain by the Claudet process, at a cost not exceeding 5*d.* per ounce.

Silver in this section being mainly a bye-product, mining charges of the copper ore which originally contained it are disregarded. This leaves an amount of 4,490,000 ozs., or two thirds of the total production under this section, to be accounted for, and in the absence of more precise evidence it does not seem unreasonable to account for them in the manner set forth. Although it is probable that the evidence respecting this section is the least satisfactory, it may be observed that the amount in question is small when compared with the total annual production.

Section IV.

This section, dealing with methods that involve the use of mercury, comprises more than half the total amount of silver produced annually. The figure, 25 dollars, which has been taken to represent the cost of mining, milling, and transport of the silver contained in the ton of ore is supported by a considerable amount of evidence. As regards the United States of America, an eminent authority, Professor Egleston, of the School of Mines, Columbia College, New York, stated in 1879, that "the cost of "treatment to large mill companies at the Comstock Mill "would not usually be as high as 8 dollars; at the "Brunswick Mill the average for the year 1874 was 7·76 "dollars;" he adds, however, that "the mill companies "rarely charge less than 12·5 dollars on large and long "contracts," and he points out that the mill companies almost always declare large dividends, while the mines are often not worked at a profit."

Another writer, Mr. Rothwell, states that the prices paid for milling Comstock ores have varied from 11 to 20 dollars per ton.

The amounts to which Professor Egleston's figures refer are very large and apply to a considerable proportion of the ores treated by mercury in the United States of America; moreover, no evidence has appeared that would lead to the supposition that the cost of extraction has varied materially since the above figures were given.

In regard to the 22,900,000 ozs. produced in Mexico, the bulk of which involved the use of mercury, there is much reason to suppose that the cost of production is fairly stated at 25 dollars per ton of ore.

Various authorities estimate the cost of the metallurgical

* Precious Metals in the United States, 1883, p. 731.
† Ibid., p. 730.
‡ Ibid., p. 730.
§ T. Egleston. The Patio and Cazo processes for amalgamating silver ores (1884), p. 46.
‖ Ibid., pp. 57 and 61.
¶ *See also* Percy's Metallurgy, Silver and Gold (1880), p. 580.

* Money Market Review, 5th May 1887.

processes involved in the extraction of the silver in Mexico at from 11 to 21 dollars per ton of ore, not including the cost of mining. Mr. R. E. Chism* estimates the cost of treatment by the old Mexican process at about 27 dollars per ton of ore, which includes a charge for profit to the owners of the works, but does not include superintendence or interest on cost of plant.

In a recent paper C. A. Stetefeldt,† referring to the year 1883, gives the total cost of reduction of a poor ore as 8·12 dollars per ton.

It is possible that the estimated yield of 70 ozs. to the ton of ore in Mexico may be too high. If, however, a minimum estimate of 50 ozs. per ton be adopted, the mean cost of production under Section IV. would be increased to 1*s.* 8*d.* per oz. standard, but this may be taken as the limit of error.

APPENDIX VII.

PAPERS put in by Mr BIRCH with regard to the Currency and Circulation in France, Germany, Italy, Spain, Switzerland, and Belgium. *See* Question 1378.

A.—BANK OF FRANCE.

MAXIMUM and MINIMUM AMOUNT of GOLD and SILVER held at various dates, with the Notes in Circulation.

Amounts stated in millions of pounds sterling.

Year.	Gold.		Silver.		Total Bullion.		Notes in Circulation.		—
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	
1868 - -	35·1	26·5	19·1	12·4	52·6	39·1	53·1	44·9	
1869 - -	29·2	23·5	23·7	18·9	50·7	42·6	57·6	51·8	On the 13th September 1869 commenced the forced currency of notes.
1870 - -	29·6	17·3	23·2	2·8	52·7	20·2	72·6	54·4	Siege of Paris, September 1870 to March 1871. During these years notes of 25 francs and 20 francs were issued.
1871 - -	23·7	14·4	5·8	1·4	27·7	15·9	94·4	68·7	In 1871 notes of 5 francs were authorised.
1872 - -	26·3	22·	5·8	3·2	31·7	25·2	107·1	88·5	By the Law of 15th July 1872 the maximum circulation of bank notes was raised to 128,000,000*l.* from 112,000,000*l.*, at which it had been fixed on the 27th December 1871. In this year notes of 5 francs were issued.
1873 - -	27·6	22·4	6·	5·	32·8	28·2	122·9	106·2	Demonetisation of silver by Germany. Last instalment of indemnity of 200,000,000*l.* paid.
1874 - -	40·6	24·4	13·2	6·	53·2	30·4	116·6	98·5	During this year notes of 20 francs and 5 francs were called in.
1875 - -	47·	40·2	20·3	12·4	66·7	52·7	108·1	93·2	No notes of 25 francs were issued during this year.
1876 - -	61·8	46·6	25·6	19·8	87·3	66·9	104·7	95·	Latin Union wholly discontinues coinage of silver.
1877 - -	62·3	48·2	34·7	25·5	91·3	82·8	109·	94·3	
1878 - -	48·1	40·1	42·4	34·4	87·3	78·7	101·9	88·1	International Monetary Conference at Paris. On the 1st January 1878 the forced currency of bank notes ceased.
1879 - -	43·5	30·1	49·	42·2	90·1	78·8	93·1	84·	
1880 - -	33·1	21·5	51·3	48·5	84·1	70·5	99·3	88·3	In December 1880 it was determined to issue notes of 50 francs.
1881 - -	26·2	21·7	50·	46·6	75·9	70·	113·	95·9	The Governor of the Bank of France in his report for 1881 refers to the efforts made to increase the stock of gold, and stated that it had been brought about in great measure by enlarged issue of small notes.
1882 - -	40·2	25·8	46·5	43·7	86·3	71·7	118·1	105·1	
1883 - -	40·6	37·9	43·7	40·1	83·3	78·6	123·9	111·	
1884 - -	42·5	37·8	41·4	39·6	83·7	77·4	126·5	112·6	
1885 - -	47·	39·7	44·2	41·	91·3	80·8	122·6	108·8	
1886:									
January -	46·6	45·7	43·5	43·1	90·2	88·8	118·2	111·8	
February -	47·7	46·	43·7	43·3	91·4	89·3	118·9	112·8	
March -	50·6	47·7	44·1	43·7	94·8	91·5	115·8	111·4	
April - -	52·1	50·8	44·8	44·2	96·8	95·	114·9	111·2	
May - -	55·7	52·1	45·4	44·8	100·9	96·8	116·3	107·5	
June - -	55·7	55·2	45·3	45·	101·	100·3	113·5	110·2	
July - -	55·4	54·3	45·2	44·9	100·6	99·2	114·6	110·9	
August -	54·7	54·1	45·3	45·1	100·	99·2	114·1	107·1	
September -	54·9	54·5	45·5	45·3	100·4	99·8	109·7	106·3	
October -	54·9	53·8	45·6	45·4	100·4	99·4	110·1	106·4	
November -	53·8	52·3	45·7	45·5	99·4	98·	112·3	108·4	
December -	52·3	49·9	45·8	45·7	97·9	95·7	111·8	108·2	

* Mining and Scientific Press, March 17, 1883.

† Trans. Ann. Inst. Min. Eng. xiii. (1884-5), p. 370.

B.—Germany.

Berlin, 4th November 1886.

I beg to answer your inquiries of the 26th ultimo as follows:—

1 and 2. Of the silver coin demonetized there has been sold on account of the empire 7,102,862 lbs. fine silver, and remains unsold 339,353 lbs. No sales have taken place since May 1879.

3 and 4. The extent and composition of the money in circulation and the momentary supply of bullion in Germany at the end of 1885 are taken about as follows:—

	£	Marks
Gold coinage of the empire (exclusive of 120 million marks in the War Treasury), about	77,500,000	1,550,000,000
Bar gold and foreign coin in the Reichsbank	9,700,000	194,000,000
German and Austrian thalers (highest estimate)	22,500,000	450,000,000
Silver coins of the empire	22,100,000	442,000,000
Nickel and copper coin	2,000,000	40,000,000
Total	133,800,000	2,676,000,000
Treasury notes of the Imperial Treasury	6,900,000	138,000,000
Bank notes not covered	18,050,000	361,000,000
Total	158,750,000	3,175,000,000

Per head of the population (46,840,000) this amounts to M. 37·20 in gold coin, in old silver coin and token money M. 10, in credit notes M. 10·7; altogether means of circulation about M. 68 per head (not counting M. 300,000,000 balances with banks which are to be considered with the circulation of notes) against M. 58·50 in 1870.

The fifth question, as to the amount the average of inhabitants carry about with them, I have been quite unable to get answered, and I do not know by what method a somewhat reliable estimate can be arrived at.

Or ces dernières on pourrait les calculer environ à 140,000,000 lire sans tenir compte des sommes qui sont chez les instituts d'émission et chez le trésor, calculant l'importation égale à l'éxportation.

De telle manière le chiffre susdit serait de 743,165,416 lire.

Quant à l'or et aux écus qui peuvent circuler entre les particuliers, les instituts de crédit et les banques mineures, il nous manque, comme nous avons déjà dit, des dates sûres pour en fixer le montant.

La rélation parlementaire du député Simonelli, du 3 Juin 1885 pour le dessein de loi pour la prorogation du cours légal des billets des instituts d'émission, calculait à 60,000,000 de lires l'or qui existait alors chez les particuliers, et à 50,000,000 lire les écus d'argent; en tout encore 111,000,000 lire qui porteraient le total de la circulation a 854,165,416 lire.

Il faut pourtant tenir compte que ces derniers chiffres ayant été le résultat de simples appréciations indirectes et déductives donnèrent lieu à des vives critiques qui en diminuèrent assez l'importance.

Pourtant on peut les accepter sans trop croire d'être éloignés du vrai, surtout après un an et demi; dans laquelle période l'or et les écus ont eu le temps de s'enraciner davantage dans la circulation.

2me Question.—A cette question répond la ci-jointe circulaire imprimée du 22 Mars 1886.

3me Question.—Il nous manque tout élément pour répondre même à peu pris à la troisième question.

C.—Italy.

1ere Question.—A la fin du 1er sémestre 1886 le trésor de l'État possédait—

	Lire
En or entre propres fonds et fonds de l'emprunt	215,522,105
En argent (écus)	6,586,515
En petites pièces	16,596,796
Total	238,705,416

Outre cette somme il y avait en monnaies d'or et d'argent pas décimales lire 76,675.16, qu'on ne pouvait pas considérer comme faisant partie de la circulation, parce qu' elles étaient hors cours.

A la même date les six instituts d'émission du royaume possédaient dans leurs réserves—

	Lire
En or	299,700,000
En écus d'argent	51,800,000
En petites pièces d'argents	12,960,000
Total	364,400,000

aux quelles il faut ajouter 330,000*l.* en or pas décimales.

Ainsi la circulation du pays pouvait être déterminée par ces deux parties soit—

	Lire
Une	238,705,416
L'autre	364,460,000
Ensemble	603,165,416

Il faut pourtant unir à ce total les montants métalliques chez les particuliers pour les quels on n'a pas de dates positives; excepté pour les petites pièces ecuises par l'état en 170,000,000 qui se trouvent sans aucun doute, pour la plus grande partie, en circulation dans le pays.

Statistics of Gold shipped to Italy in 1881–1883.

—	Gold taken at Weight.	Coins which were legal Tender in the Kingdom.	Total.
Specie received	Lire. 152,931,585·08	Lire. 491,068,425·00	Lire. 644,000,000·00
Bars	Lire. 23,353,369·46	Lire. —	Lire. 23,353,369·46
Coins; not decimal: German R. Mark	5,259,992·70	—	
Russian ½ Imperials	59,755,528·33	—	
English Sovereigns	10,058,742·07	—	129,578,215·62
Spanish 25 Pesetas	938,128·17	—	
$20 U.S. Gold	53,565 824·35	—	
Coins; decimal: 100 francs	—	93,300·0	
80 lire	—	6,960·00	
50 francs	—	14,200·00	
40 lire	—	14,040·00	338,068,415·00
20 francs	—	328,035,660·00	
10 francs	—	9,659,810,00	
5 francs	—	244,445·00	
	152,931,585·08	338,068,415·00	491,000,000·08

The above 491,000,000 were forwarded to Italy as follows:—

From—	Lire.
England	104,985,219·14
Italy	105,459,040·00
France	60,744,182·78
America	65,834,732·08
Germany	65,539,335·30
Austria	38,551,920·00
Russia	25,224,699·17
Australia	10,058,742·07
Switzerland	200,000·00
Denmark	5,519,980·00
Belgium	2,259,880·00
Spain	622,269·54
Lire	491,000,000·08

D.—Spain.

All the calculations which can be made as to the supply or stock of money have much of an arbitrary character, and even more so in Spain, where we do not know what quantity of money exists of the ancient coinages, how much is melted, how much is exported, or how much is re-imported. We have no other basis for an estimate than the ascertained coinings, and the opinions put forward by sundry authorities.

According to the well known "Diccionario de Canga," Arguelles (Vol. 2, page 331), in 1772 the Spanish money in circulation was estimated at 1,221,557,233 pesetas. But according to the report of the "Direccion General de Con-" sumos, Casas de Moneda y Minas," published in 1862 (page 67), the quantity of gold and silver remelted in 1792 reached 317,057,235 pesetas, a figure which represented the whole, or at least a great part, of the specie current in Spain.

In 1814 the same "Canga" Arguelles (Diccionario, Vol. 1, page 440), says that without exaggeration the total of money circulating in Spain might be estimated at 1,618,369,210 pesetas. In 1830 Senor Borrego calculated our wealth in specie at 1,725 millions of pesetas. It is since that time that commerce has most developed, and population increased; and the perfection reached in documents representing credit being very recent, it may well be asserted that an approximate sum of specie is necessary.

Senor Surra y Rull, in 1870, calculated the specie circulation of Spain at 2,150 millions of pesetas; of which 1,600 millions were in gold, 50 millions in large silver, and 500 millions in small silver. (Enquete sur la circulation monétaire, Vol. 2, page 112). Senor Sansoma ("The "Monetary Conference in 1881," page 33), estimates the specie in circulation at 1,200 millions of pesetas, of which 700 millions were in gold, and 500 millions in silver. The Director of the United States Mint calculated in 1881 the specie circulation of Spain to be 650 millions in gold, 200 millions in large silver, and 150 millions in small silver; total 1,000 millions of pesetas. M. Haupt ("Arbitrages et paritès," 6th edition, page 8), estimates that at the end of 1883 the specie currency of Spain was composed of 760 millions in gold, 350 in large silver, and 160 in small silver; total 1,270 millions of pesetas. The same authority ("L'histoire monétaire de notre temps," page 417), is of opinion that the money in circulation in Spain in 1885 was composed of 470 millions in gold, 420 in large silver, and 180 millions in small silver; total 1,070 millions. Alph. Allard ("La crise, la baisse des prix la monnaie") estimates at 682 millions of pesetas the gold circulating in Spain, and 367 millions the silver; total 1,050 millions.

In view of such diverse opinion, let us now look at what is shown by the mintages which have been effected.

From 1824, until the law of 1868, 824 millions of pesetas were coined in gold, and 227 millions in silver; total 1,051 millions. Later on, although with the same die, 328 millions in gold were coined, which make, with the previous coinings, a total of 1,152 millions of pesetas in gold; but 660 millions of these having been presented for re-coinage, there would remain a maximum in circulation of 492 millions in gold.

Under the law of 1868, 934 millions were coined, so that the maximum amount of gold in circulation will be 1,424 millions, without taking into account the gold of a prior date to 1824, of which there still remains some in circulation.

Senor Tutan, at the conference held in the "Atenes Barcelonés" in February 1886, estimates at 600 millions the gold which has been exported, leaving, therefore, 800 millions of pesetas in circulation, a figure probably below what would result from following the calculations of Senor Surra, and certainly above what may be deduced from those of the Director of the Mint of the United States, of Haupt, and of Allard, bearing in mind, in support of this inference, that our coinings from 1824 to 1868 hold a proportion of 80 per cent. of gold to 20 per cent. of silver.

With respect to the silver circulation, it is already shown that the amount coined from 1824 until the law of 1868 reached 227 millions of pesetas; and, there having been re-coined 28 millions, there remain 199 millions, which, added to the 610 millions coined subsequently, make up 809 millions, from which are to be deducted the amounts exported to the Colonies, Algiers, and other places, where our money circulates. The maximum figure of 600 millions fixed by the said authorities might well be accepted, making a total specie circulation of 1,400 millions of pesetas. This amount is smaller than that calculated by our authorities for 1830 and 1870; but the increased use of documents of credit, so much more general in these latter years, must be taken into account.

On the other hand, the proportion of 85 pesetas per head of the population, resulting from the total of 1,400 millions of pesetas in specie in circulation, appears more reasonable than the lower figure which would result from the estimates of other authorities, comparing the said sum of 85 pesetas with similar estimates for other nations, after duly taking into reasonable consideration their economic conditions.

In conclusion, we believe that the figures most approximating to exactness are those of 800 millions of pesetas in gold, and 600 millions in silver, as composing our specie circulation.

E.—Switzerland.

1re Question.—A combien estime-t-on le montant d'or et d'argent en espèces en circulation en Suisse?

Avant d'aborder les chiffres, il convient d'observer que la circulation fiduciaire tend à prendre de plus en plus d'importance en Suisse ainsi que le démontre le tableau suivant de l'émission des banques Suisses pendant les cinq dernières années.

1881 - -	99·4 millions de francs	d'après Mr. Otto Scherer.
1882 - -	98·3 "	
1883 - -	102·2 "	
1884 - -	114·8 "	
1885 - -	123·4 "	

La faveur de plus en plus marquée dont joint le billet de banque auprès de notre public tient à plusieurs causes—

1. La multiplicité des banques d'émission, grâce à laquelle les billets qui circulent dans chaque partie du pays sont en grande majorité ceux d'une banque locale que le public connaît parfaitement.
2. Les précautions presque exagérées prises par la loi, en ce qui concerne la couverture en espèces des billets émis par les banques.
3. Enfin la conviction générale que sous le régime actuel de multiplicité des banques il ne serait pas possible, en aucune circonstance d'établir le cours forcé.

Voici maintenant, d'après l'Inspecteur Fédéral des Banques d'Emission, Mr. Otto Scherer, une des personnes les mieux qualifiées en Suisse pour traiter cette question, quelle était à la fin de 1885 la circulation monétaire du pays—

——	Or.	Argent.
	Francs.	Francs.
Dans les banques - -	48,000,000	18,000,000
En circulation - -	22 à 32,000,000	22 à 32,000,000
Total - -	70 @ 80 millions	40 @ 50 millions

sans tenir compte de la monnaie d'appoint.

Il est intéressant de comparer ces chiffres avec ceux de Mr. Ottomar Haupt (également pour la fin de l'année 1885)—

——	Or.	Argent.
	Francs.	Francs.
Dans les banques - -	49,000,000	21,000,000
En circulation - -	30,000,000	50,000,000
Total - -	79,000,000	71,000,000

plus 18 *millions en monnaie d'appoint.*

On voit que Mr. Haupt fait au stock argent une plus large part que Mr. Scherer.

Mr. Ad. Soetbeer, qui est généralement connu comme l'un des premiers, sinon le premier, des statisticiens en cette matière, attribue au *stock or* de la Suisse une beaucoup plus grande importance absolue et relative, et considère comme minima les chiffres suivants, tout en faisant observer qu'il est fort difficile, surtout dans ce pays, d'arriver à

des données un peu certaines sur le chiffre de la circulation métallique—.

——	Or.	Argent.
	Francs.	Francs.
Dans les banques - -	47,000,000	18,000,000
En circulation - -	53,000,000	22,000,000
Total - -	100,000,000	40,000,000

plus 20 *millions en monnaie d'appoint* (*argent*). Les chiffres de Mr. Soetbeer se rapportent au 30 Juin 1885.

Malgré les divergences qui existent entre les deux premières statistiques et celle de Mr. Soetbeer, cette dernière a bien son importance, vu la compétence et la grande autorité de son auteur, et le soin qu'il apporte au contrôle de tous les chiffres qu'il avance.

2e Question.—Quelles sont les dénominations des différentes pièces en or et en argent qui ont cours en Suisse?

La Suisse fait partie de l'Union Latine et les pièces d'or et d'argent qui y ont cours légal sont par conséquent les mêmes qu'en France, en Italie, en Belgique et en Grèce. Elles sont fixées par la Convention monétaire du 6 Novembre 1885 de la manière suivante—

Pièces d'or.—De f. 100, f. 50, f. 40, f. 20, f. 10, f. 5, frappées par l'un quelconque des Etats de l'Union.

Pièces d'argent.—De f. 5 - - - - } également.
Pièces d'argent (monnaie d'appoint).—De f. 2, f. 1, f. 0·50, f. 0·20, frappées par l'un quelconque des Etats de l'Union - - }

Toutes ces pièces ont cours en Suisse, bien que la Confédération n'ait frappé que les pièces suivantes—

Or.—Pièces de f. 20 (pour un montant très-restreint).
Argent.—Pièces de f. 5.
Argent (*monnaie d'appoint*).—Pièces de f. 2, f. 1, et f. 0·50.

3e Question.—Combien les gens ont-ils l'habitude de porter sur eux; en prenant une moyenne de dix personnes appartenant à des classes différentes?

Si l'on tient compte des différences dérivant du sexe, de l'âge (doit on comprendre *les enfants?*), de la fortune, de l'occupation (et des besoins d'argent journaliers qu'elle peut entraîner), on comprendra qu'il ne soit possible de répondre à cette question d'une manière pratique. On arriverait tout au plus à une moyenne purement théorique, qui n'aurait aucune ombre d'exactitude et serait donc sans valeur.

Ce calcul rencontrerait en outre en Suisse des éléments spéciaux d'inexactitude—

1. Dans la diversité des races dont se compose la population, et partant, de leurs habitudes.

2. Dans le grand nombre d'étrangers qui parcourent le pays pendant une partie de l'année et transportent dans leurs poches des sommes plus considérables comme touristes que s'ils étaient habitants réguliers du pays. Cet élément important, qui échappe au contrôle, ne pourrait être laissé de côté dans l'établissement d'une statistique de cette nature.

Nous croyons apendant que dans ce domaine, e rôle du numéraire tend chaque jour à diminuer, les personnes qui ont l'habitude de porter sur elles une certaine somme préférant de plus en plus l'emploi des billets de banque dont les petites coupures (de f. 50 et f. 100) sont très-pratiques pour les petits paiements.

Genève le 3 Novembre 1886.

F.—Belgium.

Bruxelles, le 5 Novembre 1886.

Veuillez m'excuser si je réponds seulement anjourd'hui aux questions que vous m'avez adressées dans votre lettre du 27 Octobre proximé, mais elles étaient d'une nature telle que j'ai du consulter diverses personnes pour arriver à vous fournir, non pas la solution complète des différents points qui vous intéressent, mais quelques renseignements ayant du moins une certaine valeur.

J'ai été ainsi amené à me mettre en rapport avec le Directeur de notre Monnaie, avec l'Administration de notre Banque Nationale, le grand réservoir de notre circulation monétaire et avec des économistes de mérite très compétents dans les questions de l'espèce dont vous m'entretenez.

A la 1re de vos questions:

A combien estime-t-on le montant d'or et d'argent, en espèces, en circulation en Belgique, on me répond.

Des estimations diverses ont été faites à ce sujet. D'après l'étude faite en 1878 par M. E. Pirmez, Ministre d'Etat, il circulerait en Belgique pour 125 millions de francs en pièces de f. 5. et pour 30 millions en monnaies divisionnaires d'argent.

Toutefois il faut remarquer que cette évaluation repose sur la supposition d'une circulation proportionnelle au nombre d'habitants en France et en Belgique appliquée à la quantité de pièces de cinq francs existantes dans l'Union. Cette quantité n'est pas absolument certaine et dans cette étude, elle a été fixée trop bas: la somme de 125 millions pour les pièces circulant en Belgique semble inférieure de beaucoup à la réalité.

On pourrait admettre plutôt qu'elle est de 150 à 200 millions.

De plus, en prenant pour base d'appréciation les paiements faits à la Banque Nationale on est conduit à croire que la quantité des monnaies d'or est égale à la quantité de monnaies d'argent.

Voici les indications que demande votre 2e question disant:

Quelles sont les dénominations des différentes pièces en or et en argent qui ont cours en Belgique?

Pièces d'argent:

½ franc.
1 franc.
2 francs.
5 francs.

En monnaies d'or il n'y a en circulation que des pièces de f. 20, à l'effigie des souverains Belges.

Vouss avez que les monnaies d'or et d'argent des autres pays faisant partie de l'union latine ont aussi cours en Belgique.

Quant à la 3e question:

Combien pensez-vous que les gens ont l'habitude de porter sur eux en or et en argent, en prenant une moyenne de 10 personnes appartenant à des classes différentes?

Il m'a été absolument impossible d'obtenir, nulle part, une réponse même par approximation. Aucune statistique ne fournit les éléments nécessaires pour donner des chiffres à cet égard et les évaluations que l'on risquerait seraient du domaine de la pure fantaisie.

En regrettant de ne pouvoir vous donner des renseignements aussi complets que je l'aurais désiré, je vous présente, Messieurs, l'assurance de mes sentiments les plus distingués et bien dévoués.

APPENDIX VIII.

PAPERS PUT IN BY MR. HENRY WATERFIELD.

A.—NOTE and TABLES with reference to Paragraph 4 (1, India) of the Treasury Minute of September 6, 1886.

The Royal Commission on Gold and Silver is instructed to inquire what has been the bearing of the changes in the value of the precious metals upon the remittances of the Government of India :—

(1.) For payments on old or fixed contracts ;

(2.) For payments on new or current contracts.

An endeavour has accordingly been made to divide the net disbursements in England, for which remittances are made by the Government of India, in the manner indicated ; and, in so doing, there have been placed in Class I. payments of which the sterling amount does not fluctuate with the rate of exchange, and which are made under old contracts ; and in Class II., payments which fluctuate in amount according to the rate of exchange, or are made in consequence of recent arrangements, or are susceptible of modification.

The year 1874–75 has been selected as the starting point, that being the last in which the rate of exchange per rupee was above 1*s.* 10*d.*

The following are the heads under which the disbursements may be classed on the principles described above :—

1. *Interest on Debt.*—Up to the year 1884 it was the practice to raise debt in India rather than in England, whenever the latter course could be possibly avoided. The only material addition to the sterling debt between 1874 and 1884 was caused by the famines of 1874 and 1877, and it in no way differed from the debt raised through the necessities of the administration in previous years, as at the time of the Mutiny ; therefore, the charge for interest on debt raised up to 1884 is put into the first class. In 1885–86, owing in a great measure to the Report of the Select Committee of the House of Commons on Railways in India, it was determined to raise in London the annual loan for public works ; and, as this was the result of the policy of borrowing for that purpose in sterling rather than in rupees, the interest on this loan is placed in the second class.

2. *Stores.*—The stores being annually purchased, the quantity to be obtained is a matter of current administration, and, moreover, it would be possible, if it were thought desirable, to stipulate that payment should be made in rupees. They are, therefore, placed in the second class.

3. *Home Charges for service of British Forces in India.*—These consist mainly of the payments to the Treasury on account of the recruiting, depôt, and superannuation charges defrayed by the War Office in connexion with the British forces in India, and are in repayment of charges incurred in sterling. They, therefore, fall into the first class.

4. *Passage of Troops to and from India.*—Nearly the whole of this service is undertaken by the Transport Department of the Admiralty, and can only be effected by sterling payments. It thus belongs to the first class.

5. *Furlough Allowances of Indian Officers.* 6. *Pensions and Annuities of Retired Indian Officers.* 7. *Miscellaneous Pensions.* 8. *Indian Provident Funds.*—Most of these payments are in sterling, in accordance with the conditions under which the officers entered the service many years ago, and therefore fall into the first class. Those which have been granted in rupees, and the privilege of receiving which in England is conceded only on the condition that payment is accepted at the rate of exchange annually fixed, are placed in the second class.

9. *Remittance Transactions.*—The Secretary of State in Council makes various remittances to and from India, on behalf of the British Government and of the persons employed in the public service. A rate for the purpose is annually fixed according to the exchange of the day, so that this head belongs to the second class.

10. *Home Administration.*—The salaries and incidental expenses of the India Office are to a great extent fixed by agreement made before 1874 ; and, even in the case of persons appointed subsequently, forming as they do part of the English Civil Service, the salaries must be paid in sterling. They therefore fall under the first class.

11. *Miscellaneous.*— These are various payments not falling under any of the foregoing heads, such as payments to the British Government on account of postal and diplomatic services, which are necessarily made in sterling, and these come into the first class.

12. *Railway Companies' Transactions.*—Payments of the interest guaranteed to the old companies, and of the annuities, or interest on stock granted in lieu of annuity, to the shareholders of undertakings purchased by the Government, and also the receipts and withdrawals of capital by the old companies, belong to the first class. Payments of interest, and receipts, and withdrawal of capital, in connexion with companies formed since 1880–81, are placed in the second class. Stores for the East Indian and Rajputana-Malwa Railways, purchased under the agreements made recently with the companies working those systems, are also placed in the second class.

13. *Grants-in-aid by the British Government.* — On account of the Afghan and Egyptian expeditions. Credit is given in the first class for these sums, which were voted by Parliament in sterling.

There have thus been obtained, in respect of each of the two classes, the total net sterling payments made in each year from 1874–75 to 1885–86, and, by deducting from the total of each year, subsequent to 1874–75, the total of that year, the excess of net payments in sterling in each year over those of 1874–75 is obtained. The payments in each year being converted into rupees at the average rate obtained for bills and telegraphic transfers in those years respectively, and the number of rupees required in 1874–75 being deducted from the number in each subsequent year, the excess remittance in rupees, requisite to provide for gold payments, over that in 1874–75 is obtained. This excess is then divided into two portions ; by deducting from the requisite rupee remittance in each year the number of rupees that would have been needed for that year if the rate of exchange in 1874–75 had remained unaltered, the portion of the excess which has been caused by the fall in exchange is obtained ; and by deducting from the number of rupees needed in each year if the rate for 1874–75 had remained unaltered the rupee remittance needed in 1874–75, the portion of the excess which has been caused by an increase in the sterling payments is obtained.

This method has been applied in Table I. to the payments made on old or fixed contracts, and in Table II. to those made on new or current contracts.

In Table III. a comparison is drawn between the years 1874–75 and 1885–86, in respect of the several descriptions of payments placed under the two classes respectively. By deducting the rupee remittance required in 1874–75 for the payments in gold in that year under the several heads (column 3), from the number of rupees needed for the remittance in 1885–86 of an equivalent gold payment (column 4), the excess is shown which is caused by the fall in exchange if the sterling payments had not been increased (column 5). By converting the excess of sterling payments in 1885–86 over 1874–75 (column 7) into rupees at the rate of exchange of 1874–75 (column 8) and of 1885–86 (column 9) respectively, and deducting the former from the latter, there is obtained the further excess caused by the fall in exchange operating on the increase in the sterling payments (column 10). The addition of these two results gives the total excess due to the fall in exchange (column 11), and if to this last result be added the equivalent in rupees, at the rate of 1874–75, of the excess of sterling payments in 1885–86 (column 8), there is obtained the total number of rupees needed in 1885–86 (column 12)

to defray the sterling payments of that year under the several heads, in excess of the number needed to defray the sterling payments of 1874–75 under the same heads.

The following figures comprise, in respect of the years 1874–75 and 1885–86, the chief points shown in the accompanying tables :—

	Payments under	
	Old or fixed Contracts.	New or current Contracts.
Net gold payments in 1874–75 - - £	11,704,953	3,339,968
Rupees needed for the remittance in 1874–75 - - - - - Rs.	12,67,88,727	3,61,78,726
Rupees needed for the equivalent sum in 1885–86 - - - - - Rs.	15,38,93,374	4,39,12,943
Excess caused by fall in exchange on the net amount of gold payments in 1874–75 Rs.	2,71,04,647	77,34,217
Net gold payments in 1885–86 - - £	11,321,979	*−311,996*
Excess of net gold payments in 1885–86 over 1874–75 - - - - £	*−382,974*	*−3,651,964*

	Payments under	
	Old or fixed Contracts.	New or current Contracts.
Equivalent in rupees at rate of 1874–75 - Rs.	*−41,48,397*	*−3,95,58,286*
„ „ 1885–86 - Rs.	*−50,35,233*	*−4,80,14,977*
Excess caused by fall in exchange on increase in net gold payments in 1885–86 over 1874–75 - - - - - Rs.	*−8,86,836*	*−84,56,691*
Total excess caused by fall in exchange - Rs.	2,62,17,811	*−7,22,474*
Total excess whether from increase of gold payments or from fall in exchange - Rs.	2,20,69,414	*−4,02,80,760*

The last line shows a net reduction of Rs. 1,82,11,346 in the rupee remittance needed to defray the net sterling payments in 1885–86 as compared with those of 1874–75 This is due to the net receipt on capital account of no less than 4,643,070*l.* in 1885–86 from railway companies with which recent contracts had been made, and of 508,467*l.* from the old companies, whereas in 1874–75 the old companies withdrew 781,648*l.* from the Treasury of the Secretary of State. This reduction by 5,933,185*l.* in the net gold payments, as compared with those of 1874–75, was equivalent to a saving of Rs. 7,80,07,819 in the remittance in 1885–86.

(Signed) HENRY WATERFIELD.

November 22, 1886.

TABLE I.

	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.
PAYMENTS ON OLD OR FIXED CONTRACTS.	£	£	£	£	£	£	£	£	£	£	£	£
Interest on debt	2,178,136	2,158,349	2,299,802	2,490,881	2,590,587	2,586,929	2,339,388	2,509,719	2,478,521	2,440,691	2,422,135	2,373,405
Home charges for service of British forces in India	820,630	804,734	918,878	1,289,933	1,364,700	1,386,922	1,409,748	1,344,235	1,335,572	2,412,563	1,442,345	740,585
Passage of troops to and from India	292,860	266,734	317,152	223,846	325,518	320,651	302,317	309,397	282,192	335,504	304,949	295,492
Pensions and furlough allowances at rates fixed in sterling (approximately)	2,639,402	2,665,630	2,966,100	3,003,881	3,006,091	3,130,466	3,156,209	3,210,431	3,185,172	3,225,031	3,182,037	3,226,317
Home administration	208,934	217,369	225,953	214,286	221,088	216,208	223,116	218,322	227,514	225,162	223,299	244,643
Miscellaneous	123,588	202,748	239,783	286,922	228,437	222,652	210,478	152,955	249,917	260,465	294,112	330,683
Guaranteed companies: Guaranteed interest	4,659,755	4,655,996	4,686,751	4,685,474	4,739,259	4,752,462	3,304,487	3,314,796	3,334,737	3,284,241	3,217,240	3,180,735
Annuities and interest in respect of lines purchased	—	—	—	—	—	34,397	1,337,167	1,592,298	1,564,826	1,514,711	1,573,908	1,690,186
Net withdrawals	781,648	1,210,175	1,553,238	312,956	925,545	457,556	738,572	932,529	46,354	384,045	1,377,134	*−508,467*
	11,704,953	12,181,735	13,207,657	12,508,179	13,401,225	13,108,243	13,021,482	13,584,682	12,704,805	14,081,813	14,037,159	11,571,979
Deduct grants in aid of Afghan and Egyptian Expeditions	—	—	—	—	—	2,000,000	500,000	500,000	1,000,000	1,000,000	250,000	250,000
Net payments in sterling in each year	11,704,953	12,181,735	13,207,657	12,508,179	13,401,225	11,108,243	12,521,482	13,084,682	11,704,805	13,081,813	13,787,159	11,321,979
Net payments in sterling in 1874-75	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953	11,704,953
Excess of net payments in sterling in each year over those in 1874-75	—	476,782	1,502,704	803,226	1,696,272	*−596,710*	816,529	1,379,729	*−148*	1,376,860	2,082,206	*−383,974*
Average rate obtained for bills and transfers on India in each year	1*s.* 10·156*d.*	1*s.* 9·626*d.*	1*s.* 8·508*d.*	1*s.* 8·791*d.*	1*s.* 7·794*d.*	1*s.* 7·961*d.*	1*s.* 7·956*d.*	1*s.* 7·895*d.*	1*s.* 7·525*d.*	1*s.* 7·536*d.*	1*s.* 7·308*d.*	1*s.* 6·254*d.*
Rupees needed to provide for the net sterling payments of each year at the average rate of that year.	Rs. 12,67,88,727	Rs. 13,51,92,968	Rs. 15,45,65,240	Rs. 14,43,85,595	Rs. 16,24,87,220	Rs. 13,35,59,688	Rs. 15,05,87,158	Rs. 15,78,40,674	Rs. 14,38,98,069	Rs. 16,07,11,452	Rs. 17,13,73,265	Rs. 14,88,58,141
Rupees needed to provide for the net sterling payments of 1874-75 at the average rate of 1874-75.	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727
Total excess	—	84,04,241	2,77,76,513	1,75,96,868	3,56,98,493	67,70,961	2,37,98,431	3,10,51,947	1,71,09,342	3,39,22,725	4,45,84,538	2,20,69,414
Excess caused by fall in the rate of exchange :—												
Rupees needed to provide for the net sterling payments of each year at the average rate of that year.	12,67,88,727	13,51,92,968	15,45,65,240	14,43,85,595	16,24,87,220	13,35,59,688	15,05,87,158	15,78,40,674	14,38,98,069	16,07,11,452	17,13,73,265	14,88,58,141
Rupees needed to provide for the net sterling payments of each year at the average rate of 1874-75.	12,67,88,727	13,19,53,257	14,30,66,104	13,54,89,317	14,51,62,843	12,03,25,129	13,56,33,416	14,17,34,031	12,67,87,124	14,17,02,954	14,93,43,302	12,26,40,330
	—	32,39,711	1,14,99,136	88,96,278	1,73,24,377	1,32,34,559	1,49,53,742	1,61,06,643	1,71,10,945	1,90,08,498	2,20,29,963	2,62,17,811
Excess caused by increase in sterling payments :—												
Rupees needed to provide for the net sterling payments of each year at the average rate of 1874-75.	12,67,88,727	13,19,53,257	14,30,66,104	13,54,89,317	14,51,62,843	12,03,25,129	13,56,33,416	14,17,34,031	12,67,87,124	14,17,02,954	14,93,43,302	12,26,40,330
Rupees needed to provide for the net sterling payments of 1874-75 at the average rate of 1874-75.	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727	12,67,88,727
	—	51,64,530	1,62,77,377	87,00,590	1,83,74,116	*−64,63,598*	88,44,689	1,49,45,304	*−4,603*	1,49,14,227	2,25,54,575	*−41,48,397*
Total excess	—	84,04,241	2,77,76,513	1,75,96,868	3,56,98,493	67,70,961	2,37,98,431	3,10,51,947	1,71,09,342	3,39,22,725	4,45,84,538	2,20,69,414

TABLE II.

	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.
PAYMENTS ON NEW OR CURRENT CONTRACTS.	£	£	£	£	£	£	£	£	£	£	£	£
Interest on loan raised in 1885-86	—	—	—	—	—	—	—	—	—	—	—	52,500
Stores for India	2,786,389	2,504,927	2,415,517	2,768,486	1,892,217	2,150,379	2,511,299	1,918,418	1,669,218	1,904,469	2,079,174	3,237,413
Pensions and furlough allowances at rates fixed in Indian currency (approximately).	187,065	209,227	215,314	223,550	223,353	215,560	248,267	244,212	235,648	256,831	244,159	243,949
Remittance transactions	366,514	572,244	779,411	610,691	276,502	378,926	342,285	502,475	407,988	373,871	400,805	−6,444
Railway companies under recent contracts :—Interest	—	—	—	—	—	—	—	2,012	9,991	25,156	35,897	195,88.
Stores, &c. for East Indian and Rajputana-Malwa railways	—	—	—	—	—	27,323	522,893	475,664	453,901	400,082	403,123	607,770
	3,339,968	3,286,398	3,410,242	3,602,727	2,392,072	2,772,188	3,624,744	3,142,781	2,776,746	2,960,409	3,163,158	4,331,074
Deduct net receipts from railway companies under recent contracts	—	—	—	—	—	—	—	80,000	1,734,048	−24,725	1,427,422	4,643,070
Net payments in sterling in each year	3,339,968	3,286,398	3,410,242	3,602,727	2,392,072	2,772,188	3,624,744	3,062,781	1,042,698	2,985,134	1,735,736	−311,996
Net payments in sterling in 1874-75	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968	3,339,968
Excess of net payments in sterling in each year over those in 1874-75	—	−53,570	70,274	262,759	−947,896	−567,780	284,776	−277,187	−2,297,270	−354,834	−1,604,232	−3,651,964
Average rate obtained for bills and transfers on India in each year	1s. 10·156d.	1s. 9·626d.	1s. 8·508d.	1s. 8·791d.	1s. 7·794d.	1s. 7·961d.	1s. 7·956d.	1s. 7·895d.	1s. 7·525d.	1s. 7·536d.	1s. 7·308d.	1s. 6·254d.
Rupees needed to provide for the net sterling payments of each year at the average rate of that year.	Rs. 3,61,78,726	Rs. 3,64,72,465	Rs. 3,99,09,037	Rs. 4,15,87,339	Rs. 2,90,03,403	Rs. 3,33,31,335	Rs. 4,35,92,276	Rs. 3,69,46,364	Rs. 1,28,18,857	Rs. 3,66,72,686	Rs. 2,15,75,057	Rs. −41,02,034
Rupees needed to provide for the net sterling payments of 1874-75 at the average rate of 1874-75.	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726
Total excess	—	2,93,739	37,30,311	54,08,613	−71,75,323	−28,47,391	74,13,550	7,67,638	−2,33,59,869	4,93,960	−1,46,03,669	4,02,80,760
Excess caused by fall in the rate of exchange:—												
Rupees needed to provide for the net sterling payments of each year at the average rate of that year.	3,61,78,726	3,64,72,465	3,99,09,037	4,15,87,339	2,90,03,403	3,33,31,335	4,35,92,276	3,69,46,364	1,28,18,857	3,66,72,686	2,15,75,057	−41,02,034
Rupees needed to provide for the net sterling payments of each year at the average rate of 1874-75.	3,61,78,726	3,55,98,453	3,69,39,939	3,90,24,947	2,59,11,062	3,00,28,500	3,92,63,436	3,31,76,221	1,12,94,565	3,23,35,144	1,88,01,593	−33,79,560
	—	8,74,012	29,69,098	25,62,392	30,92,341	33,02,835	43,28,840	37,70,143	15,24,292	43,37,542	27,73,464	7,22,474
Excess caused by increase in sterling payments:—												
Rupees needed to provide for the net sterling payments of each year at the average rate of 1874-75.	3,61,78,726	3,55,98,453	3,69,39,939	3,90,24,947	2,59,11,062	3,00,28,500	3,92,63,436	3,31,76,221	1,12,94,565	3,23,35,144	1,88,01,593	−33,79,560
Rupees needed to provide for the net sterling payments of 1874-75 at the average rate of 1874-75.	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726	3,61,78,726
	—	−5,80,273	7,61,213	28,46,221	−1,02,67,664	−61,50,226	30,84,710	−30,02,505	−2,48,84,161	−38,43,582	−1,73,77,133	−3,95,58,286
Total excess	—	2,93,739	37,30,311	54,08,613	−71,75,323	−28,47,391	74,13,550	7,67,638	−2,33,59,869	4,93,960	−1,46,03,669	−4,02,80,760

TABLE III.

	1874-75.				1885-86.						
	Net Gold Payments.	Rupees needed in 1874-75 for Net Gold Payments.	Rupees needed in 1885-86 for the Net Amount of Gold Payments made in 1874-75.	Excess caused by Fall in Exchange on the Net Amount of Gold Payments made in 1874-75. (4-3.)	Net Gold Payments.	Increase in Net Gold Payments in 1885-86 over 1874-75. (6-2.)	Additional Rupees that would at Rate of 1874-75 have been needed on account of the Increase in Net Gold Payments in 1885-86.	Additional Rupees actually needed in 1885-86 on account of the Increase in Net Gold Payments.	Excess caused by fall in Exchange on the Increase in Net Gold Payments. (9-8.)	Total Excess caused by Fall in Exchange in 1885-86 over 1874-75. (5 + 10.)	Total Excess in 1885-86 over 1874-75 by Increase in Net Gold Payments, and by Fall in Exchange. (8 + 11.)
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
PAYMENTS ON OLD OR FIXED CONTRACTS.	£	Rs.	Rs.	Rs.	£	£	Rs.	Rs.	Rs.	Rs.	Rs.
Interest on debt not raised for public works - - -	2,178,136	2,35,93,694	2,86,37,511	50,43,817	2,373,405	195,269	21,15,166	25,67,341	4,52,175	54,95,992	76,11,158
Home charges for service of British forces in India - -	820,630	88,89,111	1,07,89,408	19,00,297	740,585	−80,045	−8,67,052	−10,52,409	−1,85,357	17,14,940	8,47,888
Passage of troops to and from India - - - - -	292,860	31,72,276	38,50,440	6,78,164	295,492	2,632	28,511	34,604	6,093	6,84,257	7,12,768
Pensions and furlough allowances at rates fixed in sterling (approximately).	2,639,402	2,85,90,156	3,47,02,102	61,11,946	3,225,317	585,915	63,46,665	77,03,443	13,56,778	74,68,724	1,38,15,389
Home administration - - - - - - - -	208,934	22,63,185	27,47,903	4,83,818	244,643	35,709	3,86,502	4,69,492	82,690	5,66,508	9,53,310
Miscellaneous - - - - - - - - -	123,588	13,38,713	16,24,898	2,86,185	336,083	206,495	22,36,765	27,14,938	4,78,173	7,64,358	30,01,123
Guaranteed companies: Guaranteed interest - - -	4,659,755	5,04,74,736	6,12,65,126	1,07,90,390	3,180,735	211,166	22,87,361	27,76,350	4,88,989	1,12,79,379	1,35,66,740
Annuities and interest in respect of lines purchased.	—				1,690,186						
Net withdrawals - - -	781,648	84,66,856	1,02,76,886	18,10,030	−508,467	−1,290,115	−1,39,74,600	−1,69,62,063	−29,87,463	−11,77,433	−1,51,52,033
	11,704,953	12,67,88,727	15,38,93,374	2,71,04,647	11,571,979	−132,974	−14,40,382	−17,48,304	−3,07,922	2,67,96,725	2,53,56,343
Deduct grant in aid of Afghan Expedition - -	—	—	—	—	250,000	250,000	27,08,015	32,86,929	5,78,914	5,78,914	32,86,929
	11,704,953	12,67,88,727	15,38,93,374	2,71,04,647	11,321,979	−382,974	−41,48,397	−50,35,233	−8,86,836	2,62,17,811	2,20,69,414
PAYMENTS ON NEW OR CURRENT CONTRACTS.											
Interest on loan raised in 1885-86 - - - - -	—	—	—	—	52,500	52,500	5,68,683	6,90,256	1,21,573	1,21,573	6,90,256
Stores for India - - - - - - - -	2,786,389	3,01,82,326	3,66,34,645	64,52,319	3,237,413	451,024	48,85,518	59,29,935	10,44,417	74,96,736	1,23,82,254
Pensions and furlough allowances at rates fixed in Indian currency (approximately).	187,065	20,26,299	24,59,477	4,33,178	243,949	56,884	6,16,171	7,47,895	1,31,724	5,64,902	11,81,073
Remittance transactions - - - - - - -	366,514	39,70,101	48,18,821	8,48,720	−6,444	−372,958	−40,39,903	−49,03,544	−8,63,641	−14,921	−40,54,824
Railway companies under recent contracts: Interest -	—	—	—	—	195,886	195,886	21,21,848	25,75,452	4,53,604	4,53,604	25,75,452
Stores, &c. for East Indian and Rajputana-Malwa railways	—	—	—	—	607,770	607,770	65,83,400	79,90,785	14,07,385	14,07,385	79,90,785
	3,339,968	3,61,78,726	4,39,12,943	77,34,217	4,331,074	991,106	1,07,35,717	1,30,30,779	22,95,062	1,00,29,279	2,07,64,996
Deduct net receipts from railway companies under recent contracts.	—	—	—	—	4,643,070	4,643,070	5,02,94,003	6,10,45,756	1,07,51,753	1,07,51,753	6,10,45,756
	3,339,968	3,61,78,726	4,39,12,943	77,34,217	−311,996	−3,651,964	−3,95,58,286	−4,80,14,977	−84,56,691	−7,22,474	−4,02,80,760

B.—Table showing Progress of External Trade of India.

(*See Question* 2500.)

Years.	Average Rate of Exchange per Rupee.	Imports into India.	Exports from India.
	d.		
1874–75	22·156	100	100
1875–76	21·626	107	103
1876–77	20·508	103	108
1877–78	20·791	114	116
1878–79	19·794	104	108
1879–80	19·961	114	119
1880–81	19·956	147	132
1881–82	19·895	136	145
1882–83	19·525	144	148
1883–84	19·536	153	156
1884–85	19·308	154	148
1885–86	18·254	154	149

C.—Table showing Progress of the Trade of the United Kingdom with India.

(*See Question* 2504.)

Years.	Average Rate of Exchange per Rupee.	Imports into India.	Exports from India.
	d.		
1874–75	22·156	100	100
1875–76	21·626	96	101
1876–87	20·508	110	105
1877–78	20·791	132	110
1878–79	19·794	93	101
1879–80	19·961	108	99
1880–81	19·956	132	111
1881–82	19·895	127	125
1882–83	19·525	135	127
1883–84	19·536	145	132
1884–85	19·308	147	121

D.—Table showing Per-centage of Indian Trade to the whole Trade of the United Kingdom.

(*See Question* 2513.)

	Per cent.
1870	8·3
1871	8·1
1872	7·9
1873	7·7
1874	8·5
1875	8·5
1876	8·5
1877	8·9
1878	8·5
1879	7·8
1880	8·9
1881	9·2
1882	9·8
1883	9·9
1884	9·7

E.—Table showing Price of Silver and the Exports to India from the United Kingdom.

(*See Question* 2518.)

Years.	Gold Price of Silver in London.	Total Exports to India.	Exports of Cotton Manufactures.	
		Value.	Quantity.	Value.
1874	100	100	100	100
1875	98	101	99	98
1876	90	93	102	92
1877	94	105	106	95
1878	90	97	100	89
1879	88	89	103	87
1880	89	126	125	107
1881	89	121	132	110
1882	88	121	121	105
1883	87	132	126	105
1884	87	127	122	99
1885	83	122	121	92
1886	78	?	134	96

F.—Table showing Monthly Exports of Silver to India in 1885 and 1886, with Value of Bills sold by the Secretary of State, and of Exports of Cotton Manufactures to India from the United Kingdom.

(*See Question* 2574.)

Month.	1885.			1886.		
	Sale of Bills by Secretary of State.	Export of Silver to India.	Value of Exports of Cotton.	Sale of Bills by Secretary of State.	Export of Silver to India.	Value of Exports of Cotton Manufactures to India.
	Rs.	£	£	Rs.	£	£
January	1,94,77,800	367,708	5,207,960	1,41,05,157	538,494	4,769,012
February	2,05,10,900	620,400	4,680,110	2,07,96,000	794,400	4,544,604
March	2,24,05,999	853,882	4,722,690	2,31,33,400	293,100	5,161,373
April	1,28,52,200	639,750	4,253,281	1,27,66,000	209,417	4,389,450
May	38,01,000	859,000	4,300,386	21,70,500	333,500	4,501,201
June	37,94,300	449,800	4,436,503	56,23,450	476,864	4,967,138
July	49,21,859	756,100	4,972,256	67,14,300	435,901	4,774,880
August	28,40,000	824,454	4,848,010	1,76,68,500	432,200	4,983,888
September	1,07,24,000	446,800	4,715,949	1,81,12,500	440,200	5,013,875
October	1,10,10,000	341,000	4,413,805	92,98,800	347,400	4,875,717
November	1,38,97,000	505,599	4,058,204	1,06,01,000	218,151	4,810,993
December	1,65,34,054	444,150	4,502,439	1,83,58,000	360,650	4,573,204
	14,27,69,112	7,108,643	55,111,593	15,93,47,607	4,880,277	57,365,335

G.—STATEMENT showing the DIFFERENCE between the SUMS in RUPEES, at the BUDGET RATE of EXCHANGE and at the RATE REALISED, needed to provide for the net Sterling Payments in England in each Year; and the Equivalent of that Difference in Sterling at the Rate realised.

(*See Question* 2650.)

Year.	Net Sterling Payments.			Rupees needed to provide for Net Sterling Payments.				Additional Rupees needed, owing to Exchange falling below the Rate assumed in the Budget; and their Equivalent in Sterling at Rate realised.	
	On Old or Fixed Contracts.	On New or Current Contracts.	Total.	At Budget Rate of Exchange.		At Rate realised.			
				Budget Rate.	Rs.	Rate realised.	Rs.	Rs.	
	£	£	£	s. d.	(a)	s. d.	(b)	(b) − (a)	£
1874–75	11,704,953	3,339,968	15,044,921	1 10·375	16,13,75,689	1 10·156	16,29,67,453	15,91,764	146,946
1875–76	12,181,735	3,286,398	15,468,133	1 9·875	16,97,07,516	1 9·626	17,16,65,433	19,57,917	176,425
1876–77	13,207,657	3,410,242	16,617,899	1 8·5	19,45,51,013	1 8·508	19,44,74,277	*−76,736*	*−6,557*
1877–78	12,508,179	3,602,727	16,110,906	1 9·23	18,21,29,884	1 8·791	18,59,72,934	38,43,050	332,920
1878–79	13,401,225	2,392,072	15,793,297	1 8·4	18,58,03,494	1 7·794	19,14,90,623	56,87,129	469,046
1879–80	11,108,243	2,772,188	13,880,431	1 7	17,53,31,760	1 7·961	16,68,91,023	*−84,40,737*	*−702,023*
1880–81	12,521,482	3,624,744	16,146,226	1 8	19,37,54,712	1 7·956	19,41,79,434	4,24,722	35,316
1881–82	13,084,682	3,062,781	16,147,463	1 8	19,37,69,556	1 7·895	19,47,87,038	10,17,482	84,345
1882–83	11,704,805	1,042,698	12,747,503	1 8	15,29,70,036	1 7·525	15,67,16,926	37,46,890	304,825
1883–84	13,081,813	2,985,134	16,066,947	1 7·5	19,77,47,040	1 7·536	19,73,84,138	*−3,62,902*	*−29,540*
1884–85	13,787,159	1,735,736	*15,522,895	1 7·5	19,10,51,015	1 7·308	19,29,48,322	18,97,307	152,638
1885–86	11,321,979	*−311,996*	11,009,983	1 7	13,90,73,469	1 6·254	14,47,56,107	56,82,638	432,212

H.—TABLE showing the EXCESS by fall in EXCHANGE over that for the Year 1874–75, Year by Year, in Rupees, and in Sterling at average Rate of Exchange, on Old and New Contracts.

(*See Question* 2650.)

Year.	Average Rate obtained for Bills, &c.	On Old or Fixed Contracts.		On New or Current Contracts.		Total.	
		In Rupees.	In Sterling, at Average Rate of Exchange.	In Rupees.	In Sterling, at Average Rate of Exchange.	In Rupees.	In Sterling, at Average Rate of Exchange.
	s. d.	Rs.	£	Rs.	£	Rs.	£
1875–76	1 9·626	32,39,711	291,925	8,74,012	78,756	41,13,723	370,681
1876–77	1 8·508	1,14,99,136	982,601	29,69,098	253,710	1,44,68,234	1,236,311
1877–78	1 8·791	88,96,278	770,677	25,62,392	221,978	1,14,58,670	992,655
1878–79	1 7·794	1,73,24,377	1,428,828	30,92,341	255,041	2,04,16,718	1,683,869
1880–81	1 7·961	1,32,34,559	1,100,729	33,02,835	274,700	1,65,37,394	1,375,429
1880–81	1 7·956	1,49,53,742	1,243,404	43,28,840	359,943	1,92,82,582	1,603,347
1881–82	1 7·895	1,61,06,643	1,335,174	37,70,143	312,529	1,98,76,786	1,647,703
1882–83	1 7·525	1,71,10,945	1,392,047	15,24,292	124,007	1,86,35,237	1,516,054
1883–84	1 7·536	1,90,08,498	1,547,292	43,37,542	353,076	2,33,46,040	1,900,368
1884–85	1 7·308	2,20,29,963	1,772,311	27,73,464	223,125	2,48,03,427	1,995,436
1885–86	1 6·254	2,62,17,811	1,994,083	*−7,22,474*	*−54,950*	2,54,95,337	1,939,133

K.—STATEMENT showing the net EXPENDITURE of the GOVERNMENT of INDIA from 1874–75 to 1886–87, caused by Famine, Afghan War, Military Preparations on the North-West Frontier, and Operations in Burma.

(*Question* 2655.)

Years.	Famine Relief and Insurance.	Military Operations in Afghanistan.	Military Preparations on the North-West Frontier.	Military Operations in Burma.	Total.
	(Tens of Rupees.)				
1874–75	2,248,683	—	—	—	2,248,683
1875–76	602,030	—	—	—	602,030
1876–77	2,145,517	—	—	—	2,145,517
1877–78	5,347,634	—	—	—	5,347,634
1878–79	313,547	692,391	—	—	1,005,938
1879–80	104,059	4,800,429	—	—	4,904,488
1880–81	34,840	7,539,091	—	—	7,573,931
1881–82	1,567,886	*−1,487,682*	—	—	80,204
1882–83	1,495,972	17,869	—	—	1,513,841
1883–84	1,522,813	—	—	—	1,522,813
1884–85	1,548,357	—	—	—	1,548,357
1885–86	1,500,000	—	2,268,000	390,000	4,158,000
(Revised Estimate) 1886–87 (Budget)	1,500,000*	—	—	300,000	1,800,000

* Including 138,700 paid as interest to the Indian Midland Railway Company, and included in the Railway Revenue Account.

L.—Net Revenue of the Government of India, from 1875-76 to 1886-87.

(*See Question* 2719.)

Net Revenue.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.	1882–83.	1883–84.	1884–85.	Revised Estimate, 1885–86.	Budget, 1886–87.
Principal Heads of Revenue	47,885,000	46,622,000	47,558,000	51,836,000	53,075,000	52,703,000	53,655,000	50,954,000	52,038,000	51,080,000	51,988,000	53,925,000
Direct Demands on the Revenue	7,880,000	8,407,000	8,321,000	7,478,000	7,867,000	8,053,000	8,228,000	8,489,000	8,492,000	9,559,000	9,862,000	9,675,000
Net Revenue	40,005,000	38,215,000	39,237,000	44,358,000	45,208,000	44,650,000	45,427,000	42,465,000	43,546,000	41,521,000	42,126,000	44,250,000
Land Revenue	18,589,000	16,993,000	16,948,000	19,364,000	18,924,000	18,129,000	18,944,000	18,833,000	19,033,000	18,469,000	19,007,000	19,171,000
Opium	6,253,000	6,280,000	6,522,000	7,700,000	8,251,000	8,451,000	7,804,000	7,216,000	7,702,000	5,849,000	5,805,000	6,577,000
Salt	5,736,000	5,816,000	5,915,000	6,536,000	6,925,000	6,752,000	6,890,000	5,729,000	5,697,000	6,058,000	5,829,000	5,896,000
Stamps	2,725,000	2,738,000	2,886,000	2,986,000	3,072,000	3,137,000	3,264,000	3,246,000	3,397,000	3,466,000	3,508,000	3,541,000
Excise	2,407,000	2,433,000	2,358,000	2,531,000	2,746,000	3,040,000	3,330,000	3,515,000	3,745,000	3,908,000	4,031,000	4,029,000
Provincial Rates	1,895,000	1,878,000	2,190,000	2,575,000	2,834,000	2,730,000	2,843,000	2,630,000	2,824,000	2,740,000	2,836,000	2,863,000
Customs	2,537,000	2,282,000	2,416,000	2,127,000	2,080,000	2,341,000	2,166,000	1,141,000	1,048,000	893,000	1,016,000	1,040,000
Assessed Taxes	15,000	14,000	101,000	863,000	755,000	538,000	524,000	505,000	513,000	499,000	502,000	1,399,000
Forest	277,000	158,000	240,000	150,000	211,000	243,000	316,000	370,000	402,000	308,000	353,000	411,000
Registration	51,000	58,000	84,000	105,000	104,000	108,000	106,000	102,000	92,000	108,000	118,000	119,000
Tributes from Native States	726,000	695,000	675,000	704,000	703,000	742,000	707,000	690,000	720,000	699,000	694,000	712,000
	41,211,000	39,345,000	40,335,000	45,641,000	46,605,000	46,211,000	46,894,000	43,977,000	45,173,000	42,997,000	43,699,000	45,758,000
Deduct Refunds and Assignments	1,206,000	1,130,000	1,098,000	1,283,000	1,397,000	1,561,000	1,467,000	1,512,000	1,627,000	1,476,000	1,573,000	1,508,000
Net Revenue	40,005,000	38,215,000	39,237,000	44,358,000	45,208,000	44,650,000	45,427,000	42,465,000	43,546,000	41,521,000	42,126,000	44,250,000
Average of 4 years.												
Land Revenue			17,974,000				18,708,000				18,920,000	
Opium			6,689,000				7,931,000				6,483,000	
Salt			6,001,000				6,574,000				5,870,000	
Stamps			2,834,000				3,180,000				3,478,000	
Excise			2,432,000				3,158,000				3,928,000	
Provincial Rates			2,135,000				2,759,000				2,816,000	
Customs			2,340,000				1,932,000				999,000	
Assessed Taxes			248,000				580,000				728,000	
Forest			206,000				285,000				369,000	
Registration			74,000				105,000				109,000	
Tributes from Native States			700,000				710,000				706,000	
			41,633,000				45,922,000				44,406,000	
Refunds and Assignments			1,179,000				1,484,000				1,546,000	
Net Revenue			40,454,000				44,438,000				42,860,000	

M.—Net Expenditure of the Government of India, from 1875–76 to 1886–87.

(*See Question 2719.*)

Net Expenditure.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.	1882–83.	1883–84.	1884–85.	Revised Estimate, 1885–86.	Budget, 1886–87.
Principal Heads of Expenditure	49,496,000	52,829,000	57,913,000	55,582,000	61,794,000	69,868,000	63,862,000	61,114,000	61,470,000	61,518,000	66,627,000	65,941,000
Receipts in Reduction	11,080,000	12,030,000	14,414,000	13,358,000	15,359,000	21,587,000	22,030,000	19,324,000	19,803,000	19,611,000	21,610,000	21,873,000
Net Expenditure	38,416,000	40,799,000	43,499,000	42,224,000	46,435,000	48,281,000	41,832,000	41,790,000	41,667,000	41,907,000	45,017,000	44,068,000
Interest	4,247,000	4,508,000	4,620,000	4,769,000	4,635,000	3,718,000	3,951,000	4,071,000	3,668,000	3,908,000	3,628,000	3,606,000
Post Office, Telegraph, and Mint	337,000	160,000	−45,000	186,000	7,000	153,000	315,000	241,000	361,000	347,000	329,000	314,000
Civil Departments	9,037,000	9,311,000	9,056,000	9,075,000	9,019,000	9,207,000	9,615,000	9,609,000	9,934,000	10,370,000	10,798,000	10,921,000
Miscellaneous Civil Charges	3,088,000	3,056,000	3,044,000	3,383,000	3,430,000	3,141,000	3,667,000	3,659,000	3,556,000	3,592,000	3,466,000	4,086,000
Famine Relief and Insurance	602,000	2,146,000	5,348,000	313,000	104,000	35,000	1,568,000	1,496,000	1,523,000	1,548,000	1,500,000	1,361,000
Construction of Railways (charged against Revenue in addition to that under Famine Insurance)	30,000	38,000	51,000	172,000	1,843,000	2,474,000	513,000	481,000	−176,000	264,000	631,000	109,000
Railway Revenue Account	1,559,000	1,146,000	150,000	2,076,000	1,571,000	1,044,000	286,000	1,306,000	305,000	1,051,000	782,000	1,722,000
Irrigation	1,147,000	1,022,000	992,000	813,000	311,000	283,000	569,000	716,000	547,000	573,000	778,000	731,000
Buildings and Roads	4,160,000	4,906,000	3,494,000	3,767,000	3,419,000	3,781,000	4,451,000	4,779,000	5,259,000	4,394,000	4,159,000	4,769,000
Army	14,644,000	15,531,000	16,421,000	16,954,000	21,483,000	24,147,000	15,377,000	16,635,000	17,155,000	16,149,000	18,832,000	17,424,000
Total Net Expenditure, Imperial and Provincial	38,851,000	40,924,000	43,131,000	41,508,000	45,822,000	47,983,000	40,312,000	42,993,000	42,132,000	42,196,000	44,903,000	45,043,000
Deduct portion defrayed from Provincial Balances, or add portion of Allotments unspent by Provincial Governments	−435,000	−125,000	+368,000	+716,000	+613,000	+298,000	+1,520,000	−1,203,000	−465,000	−289,000	+114,000	−975,000
Total Net Expenditure charged against Revenue	38,416,000	40,799,000	43,499,000	42,224,000	46,435,000	48,281,000	41,832,000	41,790,000	41,667,000	41,907,000	45,017,000	44,068,000
Average of 4 years.												
Interest			4,536,000				4,094,000				3,703,000	
Post Office, Telegraph, and Mint			159,000				179,000				338,000	
Civil Departments			9,120,000				9,362,000				10,506,000	
Miscellaneous Civil Charges			3,143,000				3,474,000				3,675,000	
Famine Relief and Insurance			2,102,000				891,000				1,483,000	
Construction of Railways (charged against Revenue in addition to that under Famine Insurance)			73,000									
Railway Revenue Account			1,233,000				1,328,000				207,000	
Irrigation			993,000				1,052,000				965,000	
Buildings and Roads			3,857,000				470,000				657,000	
Army			15,887,000				4,107,000				4,645,000	
Total Net Expenditure, Imperial and Provincial			41,103,000				19,410,000				17,390,000	
Deduct portion defrayed from Provincial Balances, or add portion of Allotments unspent by Provincial Governments			+131,000				44,277,000				43,569,000	
Total Net Expenditure charged against Revenue			41,234,000				+307,000				−404,000	
							44,584,000				43,165,000	

N.—Prices of Indian Government Securities.

(*See Question* 2727.)

(From de Quetteville's and Thompson's Circulars, and the Investor's Manual.)

Years.	Rate of Exchange for Secretary of State's drafts on Calcutta.		Price of Rupee Paper.				Price of Sterling Stocks.					
			In Calcutta.		In London.		4 per cent.		3½ per cent.		3 per cent.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	d.	*d.*										
1873	22 7/8	21 5/8	105 1/2	101 3/4	97 3/4	93 1/2	106	101				
1874	23 1/8	21 3/4	104 7/8	101 1/4	98	94	104 1/4	100 1/2				
1875	22 3/16	21 1/4	103 1/2	101 1/3	94 1/2	90	106 1/3	102 1/2				
1876	22 1/8	18 1/2	102 1/2	98 1/2	92	76	106 1/4	101				
1877	22 1/4	20 9/16	99 1/8	91 7/8	91	80	106 1/4	100 1/2				
1878	21	18 3/4	97	93	83 1/8	71 3/4	105	97				
1879	20 5/8	18 5/8	95 1/2	91	80 3/4	70	105 3/4	99 3/4				
1880	20 3/8	19 3/4	100 1/2	92 5/8	82 1/4	77	106 3/4	101 3/4				
1881	20 1/16	19 1/2	106 3/4	99	87 1/4	81	107	103 1/4	104 1/4	99 1/2		
1882	20 3/16	19 1/16	102 1/4	98 3/4	85 1/4	79 3/4	105 1/3	102 1/4	102 1/4	99		
1883	19 9/16	19 3/16	102 3/8	97 1/3	82 9/16	79 3/8	105 1/3	101 1/4	103 1/3	101 1/4		
1884	19 3/4	18 15/16	101 1/8	94 3/8	82 1/2	77	105 1/4	101	107 1/4	101 1/2	96 1/4	91 1/3
1885	19 3/16	17 31/32	100	91 1/2	78 5/8	72 1/2	103 1/2	97 1/3	103 1/4	97	92	83
1886	18	16 3/16	98	97 3/16	74	65	104	104 1/4	102 1/3	99	91 1/4	86

O.—Comparison of the Financial Position of the Government of India in 1880-81 with that in 1885-86 and 1886-87.

(*See Question* 2765.)

Sir John Strachey's book on the "Finances and Public Works of India" dealt with the financial position of the Government of India in 1880-81, for which he gave (at page 433) the following figures from the Revised Estimates:—

	Tens of Rupees.
Net Revenue	49,431,000
Net Expenditure, apart from War, Frontier Railways, and Famine Relief	44,335,000
Surplus, excluding these exceptional charges	5,096,000
The excluded charges were (in round figures):	
War, including Frontier Railways	11,296,000
Famine Relief	47,000
	11,343,000
And from the Receipts was deducted a capital credit on account of the assets of Military Funds	27,000
	11,316,000
So that the final result was a deficit of	6,220,000

The actual accounts differed from the Revised Estimates, and the form of stating them has been altered since 1881. For a true comparison with the recent Estimates, the figures should be arranged in the following manner:—

——	Accounts, 1880-81.	Revised Estimates, 1885-86.	Budget, 1886-87.
Net Revenue	44,649,000	42,126,000	44,250,000
Net Expenditure, apart from charges shown below	38,233,000	40,359,000	42,268,000
Surplus, apart from charges shown below	6,416,000	1,767,000	1,982,000
Excluded Charges.			
War or special military preparations	7,539,000	2,658,000*	300,000†
Construction of Railways, not provided from Provincial Revenues, or from borrowed money, or from the grant for Famine Insurance	2,473,000	500,000	—
Famine Relief and Insurance	35,000	1,500,000	1,500,000‡
	10,047,000	4,658,000	1,800,000
Final Result—Surplus	—	—	182,000
Deficit	3,631,000	2,891,000	—

* See paragraph 42 of the Financial Statement for 1886-87, where the cost of the War preparations in 1885-86 is stated at 2,057,100 in India, and 456,700 for Stores in England, to which must be added 143,900 for Exchange.

† See paragraph 26 of the Financial Statement, giving 300,000 as the Expenditure for the Army in Upper Burma.

‡ The sum of 1,500,000*l.* includes 1,361,300 shown under Famine Relief and Insurance, and 138,700 paid as interest to the Indian Midland Railway Company and included in the Railway Revenue Accounts.

When the Government of India at the end of 1877 made arrangements to meet the recurring expenditure on account of famine, the intention was to provide a surplus of 2,000,000 over the ordinary charges, of which 1,500,000 was to be devoted to the relief of or insurance against famine, and 500,000 was to meet contingencies. In the accounts of 1880-81 there was, over the ordinary charges, a surplus of 6,416,000, of which 35,000 was required for the relief of famine, and the remainder was applied in diminution of the debt that had to be raised to meet the exceptional charges for War and Frontier Railways. In the Revised Estimates for 1885-86 there was, over the ordinary charges, a surplus of 1,767,000, instead of 2,000,000, to meet the charge for Famine Relief and Insurance and an allotment of 500,000 which in the Budget had been made from revenue for the construction of railways. In the Budget for 1886-87 an ordinary surplus of 1,982,000 was provided, of which 1,500,000 was allotted to Famine Relief and Insurance (including 138,700 charged in the Railway Revenue Account for interest payable to the Indian Midland Railway Company), and 300,000 was provided for the military operations in Burmah.

The following Table shows the heads under which has arisen the change in the financial position since 1880–81:—

Net Revenue and Expenditure, excluding War, Construction of Railways, and Famine.	1885–86. Better +, or Worse −, than 1880–81.				1886–87. Better +, or Worse −, than 1880–81.			
	India.	England.	Exchange.	Total.	India.	England.	Exchange.	Total.
NET REVENUE.								
Land Revenue	+ 879,300	—	—	+ 879,300	+1,042,300	—	—	+1,042,300
Opium	−2,640,700	− 4,600	− 1,500	−2,646,800	−1,872,200	− 1,500	− 500	−1,874,200
Salt	− 927,400	− 1,700	− 500	− 923,600	− 856,600	—	—	− 856,600
Stamps	+ 397,500	− 16,900	− 8,900	+ 371,700	+ 435,600	− 20,300	− 10,900	+ 404,400
Excise	+ 991,900	− 900	− 300	+ 990,700	+ 989,200	—	—	+ 989,200
Provincial Rates	+ 105,700	—	—	+ 105,700	+ 132,600	—	—	+ 132,600
Customs	−1,324,500	—	—	−1,324,500	−1,300,900	—	—	−1,300,900
Assessed Taxes	− 35,200	—	—	− 35,200	+ 861,900	—	—	+ 861,900
Other Heads	+ 60,600	− 200	− 300	+ 60,100	+ 202,100	+ 100	− 300	+ 201,900
Total	−2,486,800	− 24,300	− 11,500	−2,522,600	− 366,000	− 21,700	− 11,700	− 399,400
NET EXPENDITURE.								
Interest	+ 694,900	− 276,600	− 328,200	+ 90,100	+ 991,700	− 449,800	− 430,200	+ 111,700
Telegraph	− 61,700	− 178,900	− 62,900	− 303,500	− 123,200	− 76,900	− 33,300	− 233,400
Law and Justice	− 219,500	− 900	− 400	− 220,800	− 329,800	− 1,700	− 700	− 332,200
Police	− 235,400	—	—	− 235,400	− 410,800	—	—	− 410,800
Education	− 224,300	—	—	− 224,300	− 293,900	+ 200	—	− 293,700
Political	− 642,500	+ 53,900	+ 7,300	− 581,300	− 200,600	+ 59,000	+ 8,400	− 133,200
Superannuation	+ 25,500	− 83,100	− 173,200	− 230,800	+ 137,100	− 204,000	− 239,000	− 305,900
Railway Revenue Account	+1,408,300	− 479,500	− 667,200	+ 261,600	+ 827,900	− 575,200*	− 791,700*	− 539,000
Irrigation	− 559,000	+ 54,300	+ 10,900	− 493,800	− 510,900	+ 52,800	+ 10,400	− 447,700
Buildings and Roads	− 387,500	+ 14,500	− 3,800	− 376,800	− 999,700	+ 16,300	− 4,200	− 987,600
Army (ordinary)	− 226,900	+ 845,400	− 185,200	+ 433,300	− 419,000	+ 320,800	− 418,100	− 516,300
Other Heads	+ 35,800	− 150,100	− 130,000	− 244,300	+ 475,900	− 244,800	− 177,600	+ 53,500
Total	− 392,300	− 201,000	−1,532,700	−2,126,000	− 855,300	−1,103,300	−2,076,000	−4,034,600
GRAND TOTAL	−2,879,100	− 225,300	−1,544,200	−4,648,600	−1,221,300	−1,125,000	−2,087,700	−4,434,000

* Excluding Indian Midland Railway Interest, 104,000, and Exchange thereon, 34,700.

These details may be summarised thus in groups:—

Better +, or worse —, than 1880–81.

——	1885–86.	1886–87.
(1.) Reduction of the duties on salt and customs (in 1882)	−2,248,100	−2,157,500
(2.) Improvement of revenue over expenditure, excluding salt, customs, opium, income tax, army, famine, construction of railways, and fall in exchange	+1,544,500	+1,339,600
(3.) Ordinary army charges, and imposition of income tax in 1886	+433,300	+380,800
(4.) Diminution of opium revenue	−2,646,800	−1,874,200
(5.) Increased charge for exchange, due to the change in the relative value of gold and silver	−1,731,500	−2,122,700
	−4,648,600	−4,434,000

The following remarks will explain these changes more fully:—

(1.) As explained in Sir John Strachey's work, the Government of India had, by the adoption of a series of measures, carried on for many years, of which the most important were the construction of the Rajputana Railway, the acquisition of the Sambhur Salt Lake, the negotiation of treaties with numerous Native States, and the temporary increase of the salt duty in Southern India, been enabled to abolish the inland customs line and greatly reduce the duty on salt throughout Bengal and Northern India, and in 1882 they were able to complete the reforms by a further reduction in Bengal, so as to equalise the rate throughout India, and then reduce it everywhere from $2\frac{1}{2}$ to 2 rupees a maund.

For some years also measures had been taken to reduce the duty on imports of the coarser cotton manufactures, so as to remove all semblance of protection for the nascent industry in India, which was seen to be rapidly developing, and which it was most important to place on an sound footing, dependent on its natural advantages and not fostered by any artificial stimulus. In 1882 it became practicable to sweep away the last remains of the import duty on cotton manufactures, and with it the duties on all goods imported into India except liquors, arms, salt, and opium.

Besides these two great measures, the burden on the land was reduced in the North-West Provinces by the remission of the cess for the payment of the village officers, and in Oudh by the transfer of the cost of such officers from the landholders to the Government.

The following was the financial effect as estimated in the budget for 1882–83:—

	£	
Surplus (after providing 1,500,000*l.* for famine relief and insurance)		3,171,000
Remission of duty on salt	1,423,000	
" import duties (net)	1,147,000	
" Patwari cess in North-West Provinces	241,000	
Total remission of taxation	2,811,000	
Increase of expenditure by payment of village officers in Oudh	75,000	
		2,886,000
Surplus retained		285,000

(2.) The increase since 1880–81 of the revenue from land, stamps, excise, provincial rates, assessed taxes (omitting the additional taxation in 1886), and minor heads, was :—

	In 1885-86.	And in 1886-87.
	2,372,300	2,735,000
The increase of expenditure, excluding Army, construction of railways, and famine, was - - - -	2,559,300	3,518,300
Showing a result worse by - -	187,000	783,100
But of the increased expenditure the fall in exchange accounted for - -	1,731,500	2,122,700
So that, apart from the fall in exchange, there would have been an improvement of	1,544,500	1,339,600

(The comparison is not quite accurate, as, on the one hand, the land revenue was exceptionally low in 1880–81, and, on the other hand, the net civil expenditure in Upper Burma is included in 1886–87.)

(3.) The permanent increase of the Army charges in India is shown at paragraph 37 of the Financial Statement as - - - - - - - 1,126,900

Besides a sum deferred to future years, estimated (paragraph 36) at - - 656,900

1,783,800

And, after adding the increased payments in England, with exchange, the total may be taken at about 2,000,000. This, however, is to a great extent met by the temporary saving effected through the alteration made in the system of payments to the Treasury for Non-Effective charges, by which, since the 1st of April 1884, India only pays the charge due to her during the year, instead of the capitalised value of such payments. The consequence is that, as compared with 1880-81, the ordinary Army charges were better by 433,300 in 1885–86, and worse by 516,300 in 1886–87, in which latter year the income tax was imposed to meet this charge, the improvement of revenue thereby being estimated at 897,100, giving a net result better by 380,800.

(4.) The following are the figures connected with the opium revenue :

—	Number of Chests sold in Bengal.	Revenue.	Charges.	Net Result.
1880-81 -	56,400	10,480,100	2,028,800	8,451,300
1885-86 -	50,994	8,914,700	3,110,200	5,804,500
1886-87 -	54,750	9,227,600	2,650,500	6,577,100

The reduction in the receipts is due partly to the necessity of diminishing the quantity offered for sale at Calcutta, owing to the amount in store having been seriously lessened in consequence of bad crops, and partly to much lower prices being realised at the sales. The increase of the expenditure arises from the fact that the two last crops were remarkably good.

(5.) Exchange on expenditure in England is worse than in 1880–81 :—

—	In 1885-86.	In 1886-87.
By - - - - - -	1,544,200	2,087,700
But of this there is attributable to increase of sterling expenditure - -	45,700	249,000
Leaving due in England to fall in exchange - - - - -	1,498,500	1,838,700
To which must be added the addition made to the British soldier's pay in India - - - - -	233,000	284,000
Making a total of - -	1,731,500	2,122,700

India Office, 24th February 1887.

H. WATERFIELD.

The foregoing memorandum has been shown to Sir John Strachey, who has returned it with the letter annexed :—

My dear Waterfield,

I understand your question to be as follows. At pp. 356 and 374 of the book on the Finances of India, written in 1881 by my brother and myself, some statements were made regarding the possibility of largely increasing the public income in the event of any serious financial emergency. You were asked by the Commission whether you agreed with those statements, and your reply was to the effect that the whole position had changed since they were made, and that they were not applicable to the existing condition of things. You ask me if you are not right in believing that this is my own opinion also. The answer is easy. Yes, I think that your Memorandum shows clearly that the conclusion stated by you is perfectly correct.

Some of the expressions used in the first of the passages in question, at p. 356, are not very well chosen, but the general opinions of the authors of the book were given clearly enough at p. 374. Reading them with what goes before, they were to the effect that the then existing financial position was very prosperous, that the main sources of revenue were improving in productiveness, and that, although no necessity of the kind was probable, there would be little difficulty in still further increasing the revenue by 2,000,000 a year. It was suggested that the greater part of such an additional sum might be raised by an income tax. Further, it was said that if, "in consequence of some great financial catastrophe," a much larger further increase to the revenue should become necessary, it could be provided without injury to the country, but only by what had before been called "heroic remedies."

Obviously in making any such forecast of the future, the first essential fact to be considered was the existing financial position. It would clearly make all the difference in the world, when the anticipated emergency arrived, whether there was a large surplus revenue to start with, or a deficit to be made good before dealing with the emergency itself.

When this book was written, early in 1881, it was stated by the authors that there was an assured normal annual surplus of revenue over ordinary expenditure amounting to more than 4,000,000. I see from your memorandum that the actual surplus over ordinary charges in 1880–81 was 6,400,000. In considering what could be done to meet some serious emergency, it was assumed, first, that we had this surplus of at least 4,000,000 to draw upon; and, second, that an additional 2,000,000 might in case of necessity, be raised. Thus, it was supposed that some 6,000,000 a year would be forthcoming before any question of resorting to "heroic remedies," would arise.

The position is now totally different. Your memorandum shows how the changes have come about. Not only has the whole of the surplus of 4,000,000 disappeared, but the greater part of the additional taxation, which in 1881 was thought immediately practicable, has already been imposed in the shape of an income tax, and although this yields much less than had been anticipated by the authors of the book, it would now be in the highest degree unwise to alter it. Thus, whereas in 1881 we had the means of meeting a very serious emergency without having recourse to any extraordinary measures, we have at the present time, as far as I can see, no such means left. There only remain the "heroic remedies," and I certainly should not now contemplate the adoption of such remedies so calmly as was possible under the very different political conditions of 1881.

But I need say nothing on such questions, which the Commission will doubtless consider fall altogether outside the sphere of this present inquiry. I should be sorry myself to give any opinions regarding them, until I knew the views of the Government of India. They alone have the means of arriving at a sound judgment, if it should unfortunately happen that extraordinary measures become necessary, and on them primarily the responsibility must rest for deciding what those measures should be.

Your sincerely,

JOHN STRACHEY.

28th February 1887.

P.—Comparative Statistics of Jute and Cotton Mills, 1876-7—1884-5.

(*See Question* 2775.)

Years.	Number of Mills.	Number of Looms.	Number of Spindles.	Average Daily Number of Hands employed.	Number of Mills.	Number of Looms.	Number of Spindles.	Average Daily Number of Hands employed.
1876-77	47	9,139	1,110,112	—	18	3,049	22,610	—
1877-78	53	10,533	1,289,706	—	21	4,094	38,946	—
1878-79	58	12,983	1,436,464	—	21	4,645	65,882	—
1879-80	58	13,307	1,470,830	39,537	22	4,946	70,840	27,494
1880-81	58	13,283	1,471,730	47,955	21	5,065	69,978	35,235
1881-82	62	14,386	1,550,944	52,231	21	5,655	90,755	40,551
1882-83	62	15,116	1,654,108	53,634	20	5,633	95,737	42,797
1883-84	74	16,251	1,895,284	61,836	21	6,139	112,650	47,868
1884-85	81	16,455	2,037,055	61,596	22	6,926	131,740	51,902

Q.—Joint Stock Companies registered and working in British India, March 1885.

Companies.	No.	Nominal Capital.	Paid-up Capital.
		Rs.	Rs.
I. Banking and Insurance Companies.	207	5,06,37,328	2,91,61,661
II. Trading Companies - -	124	4,73,54,650	2,87,92,321
III. Mills and Presses - -	152	10,80,67,330	8,98,21,282
IV. Planting Companies - -	138	4,18,07,000	3,39,21,436
V. Mining and Quarrying Associations.	25	1,28,35,100	1,06,27,387
VI. Ice Manufacturing Companies.	14	27,22,500	18,03,362
VII. Sugar Manufacturing Companies.	4	23,95,000	18,51,825
VIII. Breweries - - -	3	12,00,000	11,00,000
IX. Miscellaneous Companies -	29	1,18,58,000	92,79,171
	696	27,88,76,908	20,63,58,445

APPENDIX IX.

Papers put in by Mr. Robert Barclay.

Table No. 1.

Progress of Indian Mills during the past 22 Years. *See* Question 2301.

Years ending 30th June		Average Price of Silver.	Number of Mills.	Number of Spindles.	Number of Looms.
1865	Bombay	61 1/16	13	285,524	3,579
1866	do.	61 1/8	18	309,911	3,455
1867	do.	60 9/16	13	313,597	3,779
1868	do.	60 1/2	13	318,184	3,844
1869	do.	60 7/16	13	321,414	3,920
1870	do.	60 9/16	14	343,460	4,441
1871	do.	60 1/2	14	358,436	4,641
1872	do.	60 5/16	15	367,036	4,653
1873	do.	59 1/4	18	450,156	4,972
1874	do.	58 5/16	19	524,530	6,103
1875	do.	56 7/8	36	886,098	8,339
1876	do.	52 3/4	39	963,983	8,681
1877	do.	54 13/16	41	1,043,944	9,291
1878	do.	52 9/16	42	1,104,846	11,544
1879	do.	51 1/4	42	1,147,310	12,311
1880	do.	52 1/4	42	1,154,184	12,396
1881	do.	51 11/16	42	1,158,510	12,510
1882	do.	51 5/8	49	1,237,536	13,046
1883	do.	50 9/16	51	1,345,042	13,616
1884	do.	50 5/8	60	1,524,499	14,299
1885	do.	48 5/8	68	1,650,036	14,588
1886	do.	45 3/8	70	1,698,797	14,635
1886	Bombay as above		70	1,698,797	14,635
	Berar		1	16,380	—
	Central Provinces		2	47,040	406
	Hyderabad (Nizam's Territory)		2	35,172	405
	Central India		1	26,036	464
	Bengal Presidency		6	227,916	—
	North-West Provinces and Oudh		3	80,352	856
	Madras Presidency		7	95,728	235
	Travancore		1	11,120	—
	Mysore		1	—	—
	Pondicherry		1	23,020	452
	Total India in 1886		95	2,261,561	17,455

Table No. 2.

Exports of Cotton Yarns and Goods from India.

(*From Indian Trade and Navigation Returns.*)

Year.	Yarns shipped to China, Japan, &c.		Goods shipped to Aden, Eastern Africa, China, &c.	
	Quantity.	Value.	Yards.	Value.
	Lbs.	£		£
1876–77	7,926,710	367,303	15,544,168	373,657
1877–78	15,600,201	682,059	17,545,464	372,304
1878–79	21,333,508	886,481	22,661,231	420,150
1879–80	25,862,474	1,169,234	25,800,501	444,309
1880–81	26,901,346	1,282,576	30,424,032	540,711
1881–82	30,786,304	1,368,836	29,911,017	556,409
1882–83	45,223,000	1,816,818	41,563,000	686,319
1883–84	49,876,606	1,926,162	55,613,763	861,935
1884–85	65,897,183	2,441,100	47,968,017	818,667
1885–86	78,238,471	2,755,042	51,558,151	813,007
Six months, 1st April to 30th September 1886	47,922,360	1,729,811	29,197,180	470,534

TABLE No. 3

COTTON EXPORTS from ENGLAND to Countries indicated under the following headings.

(From the English Board of Trade Returns.)

Year.	China, Hong Kong, and Japan.				Other Countries.			
	Yarns.		Goods.		Yarns.		Goods.	
	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.
	Lbs.	£	Yards.	£	Lbs.	£	Yards.	£
1876	29,838,495	1,272,008	491,559,690	5,751,583	—	—	—	—
1881	47,479,200	1,898,089	587,177,400	6,773,730	—	—	—	—
1882	34,391,500	1,385,278	455,034,800	5,230,688	—	—	—	—
1883	33,499,800	1,295,039	415,956,400	4,631,978	11,642,600	621,425	173,128,700	2,260,484
1884	38,856,100	1,451,749	440,642,700	4,694,429	10,632,100	605,689	151,875,700	1,996,807
1885	33,061,100	1,239,012	569,339,400	5,786,566	9,424,400	512,685	147,289,100	1,859,099
1886	26,930,400	900,846	490,451,500	4,953,705	9,581,700	463,497	152,471,300	1,778,011

TABLE No. 4.

IMPORTS of COTTON GOODS from ENGLAND.

(From Indian Trade and Navigation Returns.)

	Twelve Months, 1st April to 31st March						Six Months, 1st April to 30th Sept. 1886.
	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	
Manufactured grey piece goods imported into India from the United Kingdom.	Yards. 1,170,553,819	Yards. 1,098,468,695	Yards. 1,086,285,672	Yards. 1,079,938,865	Yards. 1,138,343,726	Yards. 1,105,844,908	Yards. 690,898,451
Manufactured bleached piece goods imported into India from the United Kingdom.	285,358,911	269,804,109	233,373,431	342,376,839	277,875,450	279,123,208	197,243,573
Manufactured coloured, printed, or dyed goods imported into India from the United Kingdom.	318,051,544	254,842,804	320,935,918	299,536,491	315,345,829	355,845,715	223,613,014
Total - - - -	1,773,964,274	1,623,115,608	1,640,595,021	1,721,852,195	1,731,565,005	1,740,813,831	1,111,755,038

TABLE No. 5.

TOTAL EXPORTS from ENGLAND.

(From the English Board of Trade Returns.)

Year.	Cotton Yarns.				Cotton Goods.			
	Quantities.	Increase + *Decrease* −	Values.	Increase + *Decrease* −	Quantities.	Increase + *Decrease* −	Values.	Increase + *Decrease* −
	Lbs.	per Cent.	£	per Cent.	Yards.	per Cent.	£	per Cent.
1850	131,400,000	—	6,400,000	—	1,358,200,000	—	20,500,000	—
1860	197,300,000	+ 50	9,900,000	+ 50	2,776,200,000	+ 104	40,300,000	+ 96½
1870	187,700,000	− 5	14,800,000	+ 50	3,252,800,000	+ 17	52,500,000	+ 30
1880	215,544,800	+ 15	11,901,623	− 20	4,495,645,000	+ 38	57,678,084	+ 10
1881	254,939,900	+ 18	13,165,053	+ 10	4,777,273,300	+ 6¼	59,103,921	+ 2½
1882	238,409,900	− 6½	12,867,113	− 2	4,348,764,300	− 9	55,459,093	− 6
1883	264,772,000	+ 11	13,509,732	+ 5	4,538,888,500	+ 4½	55,534,166	—
1884	271,077,900	+ 2½	13,811,767	+ 2½	4,417,481,000	− 2¾	51,661,408	− 7
1885	245,809,900	− 9½	11,865,294	− 14	4,374,516,500	− 1	48,276,855	− 6½
1886	254,346,100	+ 4	11,488,803	− 3½	4,850,030,200	+ 11	50,170,634	+ 4

No. 6.

MEMORANDUM drawn up by E. A. HAGUE, Esq., Manchester.

The following Oldham Mills have either been closed altogether by the Indian competition of the last few years or (where buildings and capital allowed) have been adapted for and changed to spin other counts.

MULE TWIST YARN 16/24s.

Number of Spindles.	Mill.	REMARKS.
12,000	No. 1 -	Sold out machinery.
10,000	„ 2 -	Ditto.
6,000	„ 3 -	Ditto.
40,000	„ 4 -	Ditto.
13,000	„ 5 -	Ditto.
40,000	„ 6 -	One portion stopped. Other portion not reeling yarn.
80,000	„ 7 -	Now making 30s and 40s.
50,000	„ 8 -	Now making up to 40s for home use.
30,000	„ 9 -	Spinning 6s and 24s for doubling.
11,000	„ 10 -	Stopped for twelve months past.
15,000	„ 11 -	Spinning 6/26s for doubling.
10,000	„ 12 -	Ditto.
8,000	„ 13 -	Ditto.
20,000	„ 14 -	Spinning 20/34s for home use.
345,000	Total Spindles in 14 mills of which 7 are entirely stopped.	

No doubt more exhaustive inquiry would add to this list, which, moreover, does not include other towns such as Heywood and Rochdale, where also these counts were partially spun.

I have a further list of 15 other mills hitherto spinning 4s and 14s now closed, some undoubtedly by the competition of such mills as Nos. 9, 11, 12, and 13, which have been forced into adapting their machinery to spin lower Nos. than 16s though these counts were already adversely affected by hostile continental tariffs.

There is no doubt also that spinners of 16/24s water twist have been almost equally disasterously affected, but these spinners are so scattered about the country, from Rochdale to Wigan, that it is difficult, if not impossible to obtain reliable statistics.

The largest exporters of yarn to China and Japan, from tables which they keep, estimate the falling off of the exports to these markets during last years (1886) at—

300 bales (of 400 lbs. each) *weekly* of 16/24s Water
and 200 „ „ „ „ Mule,

from what they were four to five years ago, and there can be no doubt that practically this trade is being simply annihilated.

Be it remembered that up to four to five years ago this was a growing trade despite the competition of the Bombay mills, and it would have continued to grow but for the exchange difficulty.

Meantime, fostered by the quasi-protection of cheap silver these Indian mills enjoy a trade so profitable that in Bombay alone the mills have been doubled within 12 years and from eight to ten mills are now in process of construction in India besides works for bleaching, dyeing, printing, &c. Good spinning mills in Bombay have earned a steady 10 per cent. and upwards since 1878.

This same Indian competition has completely crippled Rossendale and the Todmorden Valley where *coarse* T. cloths, drills, sheetings, &c. &c. were largely manufactured for India and China. First they were mostly driven from the Bombay market, afterwards from Calcutta and Madras and now they have to meet the Indian goods in China and the East Coast of Africa, until it is probably true that half the manufacturers in these districts (of these goods, *i.e.*) have been ruined and their mills are empty where they could not be turned on to the manufacture of shirtings, &c. in competition with the Blackburn trade. True the distress in these districts was first caused by hostile continental tariffs, but they would have survived that but for the competition of the Indian mills.

This double cause makes it impossible to estimate the effect of the fall in exchange with any approach to the clearness with which it can be traced in the spinning interest, but there is another branch of trade which has been simply *extinguished* by the same cause, viz., that of *Chudders and Coarse Dhooties* made from about 20s yarns. This trade was the offspring of that "opening up of India" by the construction of new roads and railways.

It first sprang into existence some twelve to fourteen years ago, the demand being to replace the product of native hand-looms mostly from home-spun yarns. The vastly superior quality of our own goods made from American cotton quickly brought them into favour and enabled us for long to withstand even the competition of Bombay mills. But latterly the trade has gradually died out and last year we did not make a single piece.

Table No. 7.

COTTON SPINNING, MANUFACTURING, and other COMPANIES. OLDHAM and DISTRICT.

(*Taken from "The Oldham Chronicle" of 5th February* 1887.)

Name of Company.	Shares.	Paid on.	Buyers.	Sellers.	Div.
	£ s.	£ s. d.			
Abbey	2 0	2 0 0	—	—	nil
„ (pref.)	4 0	4 4 0	76/0	74/6 *d*	nil
Albany	5 0	2 10 0	6/6	5/9 *d*	nil
Albert	5 0	2 15 0	22/0	17/0 *d*	nil
Albion	100 0	40 0 0	10/0	30/0 *p*	2½
Astley	5 0	2 5 0	7/0	6/0 *d*	nil
Bankside	5 0	4 10 0	70/0	60/0 *d*	nil
Belgian	5 0	3 0 0	41/0	40/6 *d*	nil
Borough	5 0	3 0 0	19/6	16/0 *d*	nil
Boundary	5 0	3 0 0	19/0	16/0 *d*	nil
Broadway	5 0	5 0 0	56/0	49/0 *d*	nil
Brookbottom	5 0	3 0 0	41/0	39/0 *d*	nil
Butler Green	25 0	25 0 0	50/0	45/0 *d*	nil
Cambridge	5 0	4 0 0	40/0	32/0 *d*	nil
Cavendish	5 0	2 10 0	8/0	6/0 *d*	nil
Central	5 0	3 0 0	6/0	7/6 *p*	nil
Chadderton	100 0	50 0 0	par	10/0 *p*	4
Coldhurst	5 0	3 10 0	5/0	4/0 *d*	4½
Commercial	5 0	3 0 0	36/0	33/0 *d*	nil
Crawford	5 0	2 0 0	0/6	2/0 *p*	2½
Croft Bank	4 0	2 0 0	17/0	16/0 *d*	nil
Crompton	5 0	4 12 6	5/0	8/0 *p*	6½
Dowry	5 0	2 15 0	12/0	8/6 *d*	nil
Duchess	5 0	2 10 0	0/3	1/0 *p*	nil
Duke	5 0	2 10 0	1/9	2/3 *p*	4
Dukinfield Hall	5 0	5 0 0	35/0	30/0 *d*	nil
Equitable	5 0	5 0 0	58/0	60/0 *d*	nil
„ (pref.)	5 0	5 0 0	18/0	16/0 *d*	10
Fern	100 0	40 0 0	20/0 *d*	par	3¾
Garfield	5 0	2 0 0	3/6	1/0 *d*	5
Gladstone	4 10	3 10 0	46/0	44/6 *d*	nil
Glodwick	5 0	4 0 0	45/0	41/6 *d*	nil
Granville	100 0	40 0 0	60/0	35/0 *d*	3½
Greenacres	5 0	4 0 0	28/0	26/0 *d*	nil
Green Lane (old)	50 0	50 0 0	£2	£6 *p*	5
„ (new)	50 0	1 0 0	10/0	20/0 *p*	5
Grimshaw Lane	100 0	60 0 0	£3	£5 *p*	nil
Grosvenor	5 0	2 15 0	40/0	35/0 *d*	nil
Guide Bridge	5 0	2 10 0	10/0	8/6 *d*	nil
Harper Twist	5 0	3 10 0	30/0	25/0 *d*	nil
Hathershaw	5 0	3 0 0	40/0	36/0 *d*	nil
Haugh	5 0	3 0 0	3/0	4/0 *p*	6¾
Henshaw Street	5 0	4 15 0	75/0	70/0 *d*	nil
Hey	5 0	3 0 0	45/0	40/0 *d*	nil
Higginshaw	5 0	4 10 0	67/0	64/0 *d*	nil
Hollinwood	5 0	2 10 0	17/0	14/6 *d*	nil
Honeywell	5 0	5 0 0	12/0	11/0 *d*	nil
Hope	5 0	3 15 0	54/0	46/0 *d*	nil
Industry	5 0	4 5 0	75/0	71/0 *d*	nil
„ (pref.)	1 0	1 0 0	13/0	9/0 *d*	nil
Ivy	5 0	1 15 0	10/0	9/0 *d*	nil
Junction	100 0	50 0 0	20/0	40/0 *p*	4
Lancashire	4 10	4 0 0	—	— *d*	nil
Lansdowne	4 10	2 0 0	20/0	19/0 *d*	nil
Leesbrook	5 0	1 15 0	1/6 *d*	par	nil
Lees Union	9 0	6 0 0	63/0	61/0 *d*	nil
Lime	20 0	16 0 0	70/0	60/0 *d*	nil
Livingstone	5 0	2 0 0	27/0	24/0 *d*	nil
Longfield	5 0	5 0 0	84/0	78/0 *d*	nil
Lower Moor	5 0	3 15 0	5/0 *d*	3/0 *p*	8¾
Mid. and T'ge (old)	10 0	10 0 0	40/0	30/0 *d*	nil
„ (new)	5 0	5 0 0	35/0	20/0 *d*	nil
Moorfield	5 0	4 0 0	12/0	9/0 *d*	2½
Moss Lane	10 0	5 0 9	5/0	7/0 *p*	5
Mossley	4 0	4 0 0	50/0	50/0 *d*	nil
New Earth	4 0	3 10 0	44/0	41/0 *d*	nil
New Hey	5 0	2 10 0	2/6	5/0 *p*	7½
New Ladyhouse	5 0	4 0 0	par	1/0 *p*	5
North Moor	5 0	3 0 0	1/0 *d*	par	3¾
Oak	5 0	2 10 0	7/0	4/0 *d*	nil
Oldham and Lees	5 0	2 10 0	1/0 *d*	par	nil
Oldham Twist (old)	20 0	20 0 0	20/0	10/0 *d*	nil
„ (new)	20 0	10 0 0	20/0	10/0 *d*	nil
Olive	100 0	45 0 0	60/0	40/0 *d*	nil
Palm	100 0	40 0 0	30/0 *d*	10/0	5
Park and Sandy	5 0	3 10 0	26/0	20/0 *d*	nil
Parkside	5 0	3 0 0	0/6	2/0 *p*	6¾
Phœnix	5 0	2 10 0	49/6	40/0 *d*	nil
Prince of Wales	5 0	3 0 0	34/0	30/0 *d*	nil
Quick Edge	5 0	4 10 0	48/0	40/0 *d*	nil
Ridgefield	5 0	4 15 0	50/0	40/0 *d*	nil
Rochdale	5 0	2 0 0	0/6 *d*	0/6 *p*	nil
Royton	5 0	3 0 0	5/0	6/0 *p*	6¾
Shaw	5 0	3 10 0	14/6	12/0 *d*	nil
Shiloh	5 0	2 10 0	36/0	31/0 *d*	nil
Smallbrook	5 0	4 0 0	11/0	9/0 *d*	nil
Stalybridge	5 0	2 0 0	3/0	1/0 *d*	nil
Stanley	5 0	3 10 0	60/0	54/0 *d*	nil
Star	5 0	3 10 0	par	1/6 *p*	5¾
Stock Lane	5 0	2 0 0	0/6 *d*	2/0 *p*	nil
Sun Mill	5 0	5 0 0	30/0	27/0 *d*	nil
Swan	5 0	4 10 0	30/0	28/6 *d*	nil
Thornham	5 0	3 5 0	11/0	9/0 *d*	nil
Tonge Vale (A.)	5 0	5 0 0	20/0	15/0 *d*	nil
„ (B.)	5 0	2 9 0	16/0	12/0 *d*	nil
United	5 0	3 0 0	18/6	16/0 *d*	nil
Werneth	5 0	3 0 0	18/0	18/0 *d*	nil
West End	10 0	5 0 0	50/0	45/0 *d*	nil
Westwood	5 0	3 0 0	0/6 *d*	2/0 *p*	3¾
Whitelands Twist	5 0	2 10 0	6/0	4/0 *d*	nil
Windsor	5 0	2 10 0	9/0	7/0 *d*	nil
Woodstock	5 0	4 10 0	47/0	44/0 *d*	nil

APPENDIX X.

PAPERS PUT IN BY MR. H. H. GIBBS.

(1.) *Exchange* v. *Freights as a local influence on Exports.* (*See question* 3049.)

When a country's exports possess an intrinsic value considerably higher than the charge for freight on them, their price in the currency of that country will be affected far more by fluctuations of exchange than by fluctuations of freights.

The reason is that exchange, when applied to first cost, influences the principal factor of the total cost, while an alteration in freights only affects a secondary factor in the total cost.

Picking them out at random, one might say that coffee, wool, cotton, sugar, wheat, indigo, nitrate of soda, and copper, would all serve to prove the truth of the above statement, but it will suffice to give examples from the last two articles named, nitrate and copper.

The currency price of nitrate in Valparaiso at the beginning of January 1886 was $3 15c. per quintal of 100 lbs. Spanish, current freight was 26*s.* 3*d.* per English ton of 22 quintals Spanish, and the exchange ruling was 26⅜*d.* per dollar.

The average rate of exchange during that year was 23·76*d.* per Chilian dollar, and the average rate of freight was 24$\frac{9}{10}$ shillings per English ton respectively, 9·91 per cent. and 5·15 per cent. lower than the above-mentioned January quotations.

Supposing other conditions of the nitrate market to have remained the same during 1886, how would the said average declines of exchange and freights have respectively affected the currency price of $3 15c. with which the year started.

As regards exchange, it is plain that an exporter could afford to increase his offer to buy by adding to the currency price the exact per-centage of the fall in exchange; therefore he could in the present instance add 9·91 per cent., or say 31c. to the original price of $3 15c. But in considering how the fall in freights will affect the question, we must bear in mind that the decline of 5·15 per cent. cannot be applied direct to the currency price at all, but that it must, in the first instance, be applied to the proportion of freight corresponding to the weight of nitrate represented by said currency price.

This price is quoted per Spanish quintal, of which 22 go to the ton.

Therefore, we must first divide 26*s.* 3*d.* (the original freight by 22, which gives 1⅛th shillings per quintal) or, at 26⅜*d.* exchange, 59c. freight per Spanish quintal, on which a decline of 5·15 per cent. is equal to a reduction of 3c. per quintal for freight, which 3c. may now be added on to the price which the exporter can bid for the nitrate.

The calculation, therefore, stands as follows:—

	$	c.
Original price - - -	3	15
Add, for decline in exchange, 9·91 per cent. on $3·15 - - -	0	31
Add, for decline in freight, 5·15 per cent. on $·59 - -	0	3
	3	49

The above figures show that while the decline in exchange would affect the currency price to the full extent of the per-centage of fall almost 10 per cent., the decline in freights, though 5·15 per cent. (more than half that of exchange) would only affect the price to the extent of 1 per cent.

The same result will appear in a still more marked degree if we take an illustration from copper.

The currency price of Chilian bar copper at the beginning of January 1886 was $15·30 per Spanish quintal, and working on the same formula as the above for nitrate, we get the following figures:—

	$
Original price - - -	15·30
Add, for decline in exchange, 9·91 per cent. on $15·30 - -	1·51
Add, for decline in freights, 5·15 per cent. on $·59 - -	·03
	16·84

Here again, exchange affects the price to the full 9·91 per cent., while the decline in freights, 5·15 per cent., as before, only affects the price to the extent of a fifth of 1 per cent.

Copper therefore, owing to its greater value, was much more affected by exchange than nitrate. This, however, is only a side issue, and the principal point made plain by the foregoing calculations is that the fall in 1886 of 9·91 per cent. in exchange and 5·15 per cent. in freights was equivalent to the following advances on the January currency prices of nitrate and copper, viz.:—

	c.
Nitrate, equivalent extra price for lower exchange - - -	·31
Nitrate, equivalent extra price for lower freight - - -	·03
Total per quintal -	·34

	$
Copper, equivalent extra price for lower exchange - - -	1·51
Copper, equivalent extra price for lower freight - - -	·03
Total per quintal -	1·54

which figures are an emphatic confirmation of the opinion expressed at starting, that exchange exercises a far greater influence than freights on the currency prices of relatively valuable produce.

JOHN MANLEY LOWE.

London, February 23, 1887.

(2.) *Memorandum on the influence of the depreciated Currency in Chile on its Export Trade with the United Kingdom.* (*See question* 3192).

The principal exports of Chile,—wheat, copper, silver, and nitrate, have all been benefited by the depreciation of the currency in that country. The best example is wheat, as it has benefited more than the other three, and we will endeavour to show how it has been specially favoured by the declining gold value of the national currency.

To do this it will be necessary to study briefly the conditions under which it is cultivated.

Roughly speaking, Chilian wheat is produced by unskilled, and, therefore, ill-remunerated labour. The land for the most part is owned by Chilians, the farms

are very large, the soil usually good, and the tillage superficial and inexpensive. The agricultural labourers are of mixed Spanish and Indian blood, and, though very strong and hardworking, are notoriously as ignorant and backward as any Roman Catholic peasantry in the world; hence they are slow in understanding that a depreciated currency works against them in the matter of wages.

But even if they were quicker in perceiving the effect of exchange on their wages, it would not make much difference, because they only receive the smaller part of their remuneration in actual money.

A resident labourer on the estate will be allowed—

A cottage, rent free.

A piece of land, perhaps half an acre, rent free, and free use of his master's bullocks to plough it with.

A daily ration of bread and beans, and from 7*d.* to 10*d.* per day in cash.

Between his rations and the produce he gets off his patch of land he has sufficient food for his family; he can grow his own tobacco, and he drinks wine or spirits made from farm produce, grapes, or maize.

The only point where exchange touches him is in buying clothes, but, owing to the generally mild climate, his wants in this respect are very moderate, and he spends next to nothing on imported goods.

From the foregoing it will be seen that however much the currency may fall in its gold value, the Chilian agricultural labourer's subsistence is always secured to him, and that he is only harmed, and that to a small extent, by the shrinking of the money part of his remuneration. Computing the money value of his services at 2*s.* 6*d.* per day, of which only 10*d.* is paid in cash, and supposing the currency to have depreciated 50 per cent., it is clear that he is only affected to the extent of 5*d.* per day, or less than 17 per cent. of his total earnings.

Therefore, even supposing him to find this out immediately, and to have the means to enforce his claim (both of which suppositions are contrary to experience) his employer will only have to increase his total wages 17 per cent. to redress his grievance.

Now let us look at the farmer's side of the question, bearing in mind that he employs no skilled labour, uses no artificial manures, and that his labourers till the land with the cattle bred on the estate.

We will assume his wheat, at 46*d.* exchange to have been worth for export $4 per hectolitre of 166 lbs. Spanish, and that the gold value of the currency has gradually receded to 23*d.* per dollar.

We will also assume that at 46*d.* exchange his wheat was costing him $3 per hectolitre, of which the half for labour, and the rest for general farm expenses, freight by rail to the nearest port, and shipping expenses.

In the first instance, with exchange at 46*d.*, he can sell his wheat at $4, equal to 15*s.* 4*d.*, but in the second exchange has receded to 23*d.*, while the price of wheat in Europe and other conditions have remained the same. The Valparaiso merchants can still afford to pay the equivalent of 15*s.* 4*d.* for the wheat, and competition will oblige them to do so. But 15*s.* 4*d.* at 23*d.* is equal to $8, or double the price which the farmer formerly got, so that his gross currency profit on an hectolitre of wheat will be $5, instead of $1, as in the first example considered.

We have now only to examine what effect the lower exchange will have on his cost of production, which we have assumed to be $3 when exchange was 46*d.*

	$	c.
Proportion of wages to total cost of producing wheat, one-half of $3	1	50
Deduct, paid by free rations, &c. -	1	0
Payment of wages in actual money -	0	50

	$	c.
50 per cent. depreciation in exchange, made good - -	0	25
Extra cost of bagging - -	0	10
Sundries, say - - -	0	5
Total extra expenditure, per hectolitre - -	0	40

which will leave the farmer with a nett profit of $4 60 c. at 23*d.*, while he only made $1, when exchange was at 46*d.*

It is thus easy to understand how Chile has maintained its position as a wheat exporting country in spite of the collapse in the European price of wheat. When exchange stood at 46*d.* the European price of wheat was in the neighbourhood of 55*s.* per qr., while within the last two years it has touched 30*s.*, and exchange has been below 23*d.* Thus, although wheat in Europe has fallen 45 per cent., the currency price in Chile has, as a rule maintained, and sometimes exceeded, its level in former years, in some measure owing to the steady decline in freights, but more particularly to the rapid depreciation of the currency of the country.

The Chilian farmers have been doubly benefited by the fall in exchange, as it has not only tended to increase their incomes, but has at the same time reduced their debts.

As a class they were heavily under advance to the various banking establishments in the country, but of late years they have been receiving extra profits arising from the lower exchange, and have been using these profits to pay off in dollars worth, perhaps 23*d.* currency debts incurred when the dollar was very likely worth 40*d.* or more. It is easy to see what a stimulating effect this would have on their business, and how it would encourage them to increase their wheat acreage.

Altogether, it may reasonably be inferred that if the price of wheat in Europe had been maintained, and Chilian currency had fallen to its present level (23*d.* to 24*d.*), exports would probably have been doubled long ere this, or conversely.

If the price of wheat had receded to 30*s.*, and Chilian exchange had remained steady at 46*d.*, the export of wheat would have been seriously curtailed, if not rendered, altogether impossible.

As it is, the fall in the European price of wheat has been more than counterbalanced by the depreciation in the Chilian Exchange; no extreme effects have been felt either way, but the falling Exchange, assisted by the decline of freights, has enabled the Chilian farmer in many instances to do considerably better than he did formerly with a high price of wheat in Europe and a high exchange on the coast, and has therefore directly tended to protect and stimulate exports.

What is true of wheat is also true, to a less extent, of copper and silver, and to a still less extent, of nitrate. In the production of copper and silver, skilled labour and imported coal, coke, &c. are used, and to a large extent increase the currency cost in direct ratio with the fall of exchange. In the production of nitrate, the currency wages paid to unskilled labour form a still less important item in the total cost, the bulk of which is on a sterling basis, and therefore not affected by fluctuations in exchange. Wheat therefore seems the best article to single out for the purpose of tracing the influence of a depreciated currency on Chilian exports.

JOHN M. LOWE.

London, February 14, 1887.

APPENDIX XI.

Papers put in by Mr. A. D. Provand, M.P.

(1.) Table showing Prices at Shanghai in each month, from March to August 1886, of six imported articles of Standard quality and also the Rate of Exchange for demand Bank Bills on London. (*See* Question 3312.)

——	March	April.	May.	June.	July.	August.
Rate of exchange, per tael - -	4/7	4/6⅜	4/6½	4/6½	4/4½	4/2⅞
Lead, L.B. brand, per picul - -	4·45	4·22½	4·27½	4·15	4·12½	4·25
Tin plate, 10×14, per box - -	4·12½	4·12½	4·12½	4·12½	4·12½	3·90
Nail Rods (Dawes), per picul - -	2·00	2·00	2·00	2·00	2·00	2·00
Spanish stripes, H.H., per yard -	0·48¼	0·46½	0·46¾	0·47½	0·47	0·50
Long ells (scarlet) H.H., per piece -	5·12½	5·12½	4·82½	4·74	4·94	5·10
8¼ lb. gray shirtings - -	1·73	1·73	1·72	1·71	1·72	1·75

Note.—From March to August exchange fell eight per cent. To meet this there was no corresponding advance in the prices of goods. Nearly all the six articles were actually lower in August than they had been in March, notwithstanding that the largest business during the year is done during the months from March to August.

(2.) Table showing Results of 56 Transactions completed with Shanghai between January 1886 and May 1887. (*See* question 3289.)

Dates.	1. Banks buying Rates in London for 60 days Drafts on Shanghai.	2. Banks selling Rates for telegraphic transfers in Shanghai on London on the same date.	3. Differences between the Rates in Columns 1 and 2.	4. Rates of Interest per Annum which selling Drafts at the Rates in Column 1 would be to the Merchants, assuming exchange did not alter during the Currency of the Drafts.	5. Due dates in Shanghai of Drafts sold in the Dates in the Margin, allowing 42 Days for passage and 63 for usance and grace. Total 105 Days.	6. Actual Telegraphic Rates in Shanghai on London on the Dates in Column 5.	7. Plus and Minus differences between the Banks buying Rates (Column 1) and their selling Rates for Telegraphic Transfers in Shanghai on London on the due Dates of the Drafts (Column 5).	8. Actual Rates of Interest per Annum paid by Merchants who sold Drafts at the Rates of exchange in Column 1 (on account of the rise in exchange during the Currency of the Drafts.)	9. Actual profits to Merchants who had sold Drafts at the Rates of exchange in Column 1 (on account of the fall in exchange during the Currency of the Drafts).
1886.	s. d.	s. d.	d.		1886.	s. d.	d.		
January 12	4 5¼	4 6¼	1	6⅓ per cent.	April 27	4 6¾	+1½	9⅔ per cent.	—
19	4 5⅜	4 7⅜	2	13 „	May 4	4 6⅝	+ ⅝	4 „	—
26	4 5⅜	4 7⅛	1⅝	9 „	11	4 6½	+ ⅜	3½ „	—
February 2	4 5⅜	4 7⅛	1⅝	9¼ „	18	4 5⅞	*	—	—
9	4 5½	4 7	1½	11½ „	25	4 6½	+1	6½ „	—
16	4 5⅝	4 6⅞	1⅛	7⅛ „	June 1	4 5⅞	+ ¼	1⅞ „	—
23	4 5⅝	4 6⅞	1⅛	7⅛ „	8	4 6	+ ⅜	2½ „	—
March 2	4 5⅝	4 6⅞	1⅛	7⅛ „	15	4 5⅝	*	—	—
9	4 5⅝	4 6¾	1⅛	7⅓ „	22	4 5⅝	− ¼	—	½ per cent.
16	4 5⅝	4 6¾	1⅛	7⅓ „	29	4 5	− ⅝	—	1 „
23	4 5⅝	4 6¾	1⅛	7⅛ „	July 6	4 4⅜	−1¼	—	2½ „
30	4 5⅜	4 6¾	1⅛	7⅛ „	13	4 3½	−2½	—	4 „
April 6	4 5⅜	4 6¾	1¼	8 „	20	4 3⅜	−2	—	3¾ „
13	4 5⅜	4 6⅞	1⅜	10 „	27	4 3⅜	−2⅛	—	4 „
22	4 5¼	4 6¾	1½	8 „	August 5	4 2⅞	−2⅝	—	5½ „
29	4 5½	4 6¾	1¼	8 „	12	4 3⅛	−2⅜	—	4½ „
May 6	4 5	4 6½	1⅜	9 „	19	4 2⅞	−2⅛	—	5 „
13	4 5	4 6⅛	1⅛	8¼ „	26	4 3	−2	—	3¾ „
20	4 4⅞	4 5⅞	1⅛	7⅞ „	September 2	4 3	−1⅞	—	3 „
27	4 4⅞	4 6⅛	1⅜	11½ „	9	4 4⅛	− ⅛	—	1 „
June 3	4 4½	4 5⅞	1⅜	9 „	16	4 4⅜	− ½	—	¼ „
10	4 4⅜	4 6	1⅜	9 „	23	4 4⅜	*	—	—
17	4 4⅛	4 5⅛	1	6¼ „	30	4 5	+ ⅜	2⅔ per cent.	—
24	4 4⅛	4 5⅛	⅞	5 „	October 7	4 5⅛	+ ⅛	4 „	—

(2.) Table showing Results of 56 Transactions—*continued.*

Dates.	1. Banks buying Rates in London for 60 days Drafts on Shanghai.	2. Banks selling rates for telegraphic transfers in Shanghai on London on the same date.	3. Differences between the Rates in Columns 1 and 2.	4. Rates of Interest per Annum which selling Drafts at the Rates in Column 1 would be to the Merchants, assuming exchange did not alter during the Currency of the Drafts.	5. Due dates in Shanghai of Drafts sold in the Dates in the Margin, allowing 42 Days for passage and 63 for usances and grace. Total 105 Days.	6. Actual Telegraphic Rates in Shanghai on London on the Dates in Column 5.	7. Plus and Minus differences between the Banks buying Rates (Column 1) and their selling Rates for Telegraphic Transfers in Shanghai on London on the due Dates of the Drafts (Column 6).	8. Actual Rates of Interest per Annum paid by Merchants who sold Drafts at the Rates of exchange in Column 1 (on account of the rise in exchange during the Currency of the Drafts.)	9. Actual profits to Merchants who had sold Drafts at the Rates of exchange in Column 1 (on account of the fall in exchange during the Currency of the Drafts).
1886.	*s.* *d.*	*s.* *d.*	*d.*		1886.	*s.* *d.*	*d.*		
July 1	4 4	4 5	1	6½ per cent.	October 14	4 5⅜	+1⅜	9½ per cent.	—
8	4 3	4 4⅜	1⅜	9½ „	21	4 5	+2	13⅞ „	—
15	4 2	4 3½	1½	10 „	28	4 5½	+3½	24⅝ „	—
22	4 2	4 3⅝	1⅝	11⅛ „	November	4 6⅛	+4⅛	28¼ „	—
29	4 2	4 3⅝	1⅝	9½ „	11	4 6⅛	+4⅛	31⅛ „	—
August 5	4 0½	4 2⅝	2⅛	15⅛ „	18	4 7⅜	+6⅜	49½ „	—
12	4 0⅜	4 3⅛	2⅜	17½ „	25	4 8	+7¼	52 „	—
19	4 0½	4 2⅝	1⅞	13½ „	December 2	4 8	+7½	53⅛ „	—
26	4 0⅜	4 3	2⅛	16 „	9	4 8	+7¼	52 „	—
September 2	4 1	4 3	2	14⅛ „	16	4 7⅜	+6⅜	40 „	—
9	4 1⅜	4 4⅛	2⅛	17½ „	23	4 6⅜	+5	35 „	—
16	4 1⅜	4 4⅜	2⅜	18½ „	30	4 6⅛	+4⅞	33½ „	—
23	4 1⅜	4 4⅝	2⅝	20⅛ „	1887. January 6	4 6⅜	+5⅛	36½ „	—
30	4 2½	4 5	2⅝	16½ „	13	4 7⅛	+5	35 „	—
October 5	4 2½	4 5⅛	2⅝	19 „	18	4 8	+5⅛	38 „	—
12	4 3⅛	4 5⅜	2⅛	14⅜ „	25	4 7⅛	+4⅛	29⅜ „	—
19	4 3½	4 5	1½	10 „	February 1	4 7⅛	+3⅝	24⅞ „	—
26	4 3⅝	4 5½	1⅞	11⅛ „	8	4 6⅞	+2⅝	19⅛ „	—
November 2	4 4	4 6⅛	2⅛	14⅛ „	15	4 6⅛	+2⅛	16¼ „	—
9	4 4	4 6⅛	2⅛	16¾ „	22	4 5⅞	+1⅛	10 „	—
16	4 5	4 7⅛	2⅝	15⅛ „	March 1	4 5⅞	+ ⅝	2⅜ „	—
23	4 5	4 8	3	19⅜ „	8	4 5⅛	+ ⅛	1⅛ „	—
30	4 4⅜	4 8⅛	3⅜	22⅛ „	15	4 4⅛	− ⅛	—	⅛ per cent.
December 7	4 5⅛	4 8	2⅞	18 „	22	4 4⅛	−1⅛	—	2 „
14	4 5⅛	4 7⅞	2⅝	17⅛ „	29	4 4	−1⅛	—	2⅛ „
21	4 4⅝	4 6⅞	2⅛	15 „	April 5	4 3⅛	−1	—	2 „
28	4 4⅛	4 6⅛	2	13⅛ „	12	4 3⅛	−1	—	2 „
1887. January 4	4 4⅛	4 6⅛	2⅛	14 „	19	4 4	− ⅜	—	1⅛ „
11	4 5⅛	4 7⅛	2⅛	14⅞ „	26	4 4⅛	− ⅜	—	1⅛ „
18	4 5⅛	4 8	2⅞	16⅛ „	May 3	4 4	−1⅛	—	2⅛ „
25	4 5⅛	4 7⅛	2	13⅛ „	10	4 3⅞	−1⅛	—	3⅛ „
February 1	4 5⅛	4 7⅛	1⅞	10⅛ „	17	4 4	−1⅛	—	2⅛ „

The above table of 56 completed transactions with Shanghai during the past 13 months shows how the export trade from the United Kingdom to China is affected by the fluctuations in the rate of exchange.

Columns 1, 2, and 3 show the position when each draft was sold; the average value of the tael in column 1 is 4*s.* 4⅜*d.*, and as the average difference between the rates in columns 1 and 2 is 1⅜*d.* (column 3), this on 4*s.* 4⅜*d.* for 105 days, the currency of the drafts (*see* heading, column 5), is at the rate of 11⅜ per cent. per annum, which the merchant would have paid for the use of the money, assuming the rate did not alter during the 105 days.

Column 4 shows that the rates at the different dates varied from 6½ per cent. to 23⅛ per cent. (the average of the 56 transactions being 11⅜ per cent., as stated above) according to the view the bank took of the future of the rate of exchange.

Column 5 shows the due dates of payment in Shanghai of the various drafts.

Column 6 shows the rates for telegraphic transfers in Shanghai on London on the dates as near as they can be ascertained when the bank was paid the drafts.

Column 7 shows the differences between the telegraphic transfer rates when the drafts were sold to the bank (column 2) and when they were paid to the bank (column 7) and the variations of exchange were meantime so great that—

Column 8 shows that the merchants who sold at the rates in column 1 paid varying rates of interest (as compared with those who did not sell) up to 52¾ per cent. per annum; and

Column 9 shows that those who sold at the rates in column 1 had the use of the money for the 105 days (for nothing where marked *) and made a profit besides varying from ⅛ per cent. to 5⅛ per cent. on the transactions noted in this column, the fall in exchange had been so great meantime.

It follows from the above that the merchants who sold their drafts forward usually lost on the transactions, when exchange meanwhile advanced, and on the other hand the merchants who did not sell forward, but took the rate ruling in Shanghai when the goods were sold, usually lost when exchange fell, and the conflicting interests of the two classes of merchants kept the rates for imports in Shanghai fairly steady. Cotton goods is the largest item of our exports to China, and while exchange fell 11 per cent. between January and August 1886, and rose as much between August 1886 and January 1887, the Manchester prices of cotton goods varied only about 3 per cent. during these 13 months. The merchant's ventures were therefore chiefly in exchange and not in Manchester goods. The trade is keenly competed for. If a merchant was fortunate in selling drafts forward, or in not doing so, he would likely gain, but if not fortunate, loss was certain, and as loss might come by either a rise or a fall in exchange, instead of the merchant being described as an exporter of cotton goods to China, it would be a more accurate description to say he was a speculator in exchange with China by means of cotton goods.

APPENDIX XII.

CORRESPONDENCE between the TREASURY, the INDIA OFFICE, and the GOVERNMENT OF INDIA.

The SECRETARY of the TREASURY to the CHAIRMAN of the GOLD and SILVER COMMISSION.

Treasury Chambers,
25th November 1886.

SIR,

I AM directed by the Lords Commissioners of Her Majesty's Treasury to request you to lay before the Royal Commission on Gold and Silver the enclosed copy of a letter upon the silver question which has been addressed to them by the Secretary of State in Council of India.

My Lords note the earnestness with which the Government of India urge upon the Secretary of State the difficulties of the situation. It is not necessary for them here to enter upon the discussions which have taken place between the Treasury and the Secretary of State on the silver question. The Treasury, however, while differing widely from the Secretary of State upon many points, has never questioned the inconvenience to which the fall and the fluctuations in the gold price of silver subject the Government of India, and my Lords would be ready to promote by legitimate means, not involving a charge on the taxpayer of the United Kingdom, an extended use of silver in this country. They can only assure the Royal Commission that any suggestion which may be made by a body so well qualified to express an opinion on the subject, will receive their most respectful attention.

I am, &c.
(Signed) W. L. JACKSON.

The Right Hon. A. J. Balfour, M.P.,
Chairman of the Gold and Silver Commission.

Enclosure.

India Office, Whitehall, S.W.,
4th November.

SIR,

IN January last, under the direction of the Secretary of State for India (then Lord Randolph Churchill) in Council, I had the honour to address you, for the information of the Lords Commissioners of Her Majesty's Treasury, on the subject of the serious difficulties which had been caused in the financial administration of India, by the continued fall in the price of silver in relation to gold, and the uncertainty that existed as to the future exchange value of the rupee.

Subsequently a letter was forwarded to the Treasury, which had been received from the Government of India, stating at some length the grounds on which they considered that it was desirable to endeavour to settle the silver question by international agreement.

At the end of May Mr. Fowler, the Secretary of the Treasury, replied, on behalf of the Lords Commissioners, to the letter in which the Secretary of State in Council had called the attention of their Lordships to this subject. For reasons which were stated in my letter of the 7th July, the Secretary of State in Council while taking specific exception to certain statements contained in the Treasury letter, abstained from entering into a discussion on the subject, which, it was understood, was under the notice of the Royal Commission on the Depression of Trade, and expressed the hope that another opportunity might be afforded at an early date for the consideration of the question in which the Government of India had so great an interest.

A copy of the correspondence between this Office and the Treasury having been sent to the Governor General of India in Council, the Government of India has addressed to the Secretary of State for India a letter replying to Mr. Fowler's letter of the 31st of May last, and I am now directed to forward a copy of this letter for the information of the Lords Commissioners of the Treasury, with the following remarks.

Her Majesty's Government having resolved that it was expedient to refer the whole of the questions arising in connexion with the recent changes in the relative values of the precious metals to a Royal Commission, and such a Commission having now been appointed, the Secretary of State for India in Council considers that it will be desirable that copies of the correspondence that has been above referred to should be laid before the Commission, and he will further be prepared to furnish it with any other information on the subject of their inquiry which may be at his disposal.

It would obviously be out of place at the present moment to attempt any discussion of the more technical points raised by the Government of India relative to the desired establishment of a fixed ratio between gold and silver for currency purposes, as these are among the chief subjects on which the opinion and advice of the Royal Commission have been asked, and that body will have to judge of the relative weight of the arguments addressed by the Governor General of India in Council and of those to which they are designed to reply.

Neither does it seem desirable to offer any comments on the question whether India has, in respect to its trade or otherwise economically, gained or lost by the effect of the recent fall in the value of silver in relation to gold. The facts bearing on this part of the subject are, however, of great interest; they have received special attention in the Financial Department of the Government of India, and a copy of a note prepared by the Assistant Secretary in that department is annexed.

Viscount Cross entirely concurs with the Government of India in the observations contained in paragraphs 15 and 16 of their letter so far as they relate to certain proposals affecting the Indian coinage made in 1878, which had not been renewed or even referred to on the present occasion. In addition to the general explanations afforded in paragraphs 17 to 22 relative to the growth of Indian expenditure, it may further be stated that much of the apparent growth of expenditure referred to in the Treasury letter is due to changes in the form of the Indian accounts and to the exhibition of charges on account of public works, affecting alike both the receipts and expenditure which in former years had been excluded from the published statements.

The Secretary of State for India in Council likewise desires especially to repudiate the idea apparently entertained in some quarters that the Government of India has been unduly influenced in its representations on this subject by the personal interests of the English officials in India, otherwise than so far as every Government not only may, but is in duty bound to consider the welfare of its servants.

In conclusion, Viscount Cross will only repeat the opinions expressed by Lord Randolph Churchill in January last, and reiterated by the Government of India time after time, as to the difficulties and dangers to which India is exposed by the present state of the silver question. "Further taxation appears at present inevitable" says the Viceroy in his last letter "and when we have again established equilibrium there is no prospect that the settlement will be final or even reasonably permanent," and he concludes by saying, "we do not, therefore, hesitate emphatically to repeat that from the point of view of Indian finance the position has become intolerable."

I have, &c.
(Signed) J. A. GODLEY.

The Secretary to the Treasury.

No. 277 of 1886.

GOVERNMENT OF INDIA.

DEPARTMENT OF FINANCE AND COMMERCE.

ACCOUNTS AND FINANCE.

To the Right Hon. VISCOUNT CROSS, G.C.B., Her Majesty's Secretary of State for India.

MY LORD,

Simla, 4th September 1886.

WE have the honour to acknowledge receipt of Lord Kimberley's Financial Despatch No. 194, dated 8th July 1886, forwarding a copy of correspondence with the Treasury on the subject of the settlement of the exchange question by international agreement.

2. In our Despatch No. 45, dated 2nd February 1886, we pressed upon Lord Randolph Churchill the extreme importance in the interests of our Government of settling the silver question by international agreement, and we observe with much satisfaction that in Mr. Godley's letter of 26th January 1886, addressed to the Lords Commissioners of Her Majesty's Treasury, the Secretary of State for India in Council stated that he could not avoid "the conclusion that it is imperatively necessary to make every effort to find some remedial measure which will relieve the Government of India from the position in which it is now placed," and that "the comparative stability of the relative value of gold and silver" was "essential for the regular course of trade" and "of vital importance to India." The Lords Commissioners of Her Majesty's Treasury replied, in Mr. Fowler's letter of 31st May 1886, to our proposals and to the communications made by the Secretary of State for India in Council, that they could take no measures for summoning, or co-operating in, a new Monetary Conference until they had previously determined what policy they should initiate, or could assent to; that the whole question was understood to be under the consideration of the Royal Commission on the Depression of Trade; and that there was nothing in the correspondence and information before the Lords Commissioners which should induce them to depart from the instructions given to the Representative of England at the Monetary Conference of 1881. The instructions given to the English delegate at that Conference were to the effect that "he would assist at the "meerings of the Conference solely in order to be a medium "of communication, and to afford information which the "Conference may require, but with no power of voting."

3. We observe that your Lordship's predecessor did not propose to continue at present the discussion of this important matter with the Treasury. We have no wish to question the expediency of this decision; but, in view of the probability of the subject being again taken into consideration in compliance with the recommendations of the Royal Commission now inquiring into the causes of the depression in trade, we think it of importance to acquaint your Lordship with our views on the main points raised in the letter from the Lords Commissioners of Her Majesty's Treasury, dated 31st May 1886. We cannot, meanwhile, in view of the experience gained since 1881, and of the grave importance of the question, avoid expressing disappointment at learning that Her Majesty's Government proposes to adhere to a purely passive attitude, and that the Government of India is to meet its pressing financial difficulties unaided, or with such assistance as it may derive from the action of foreign nations. We trust that this decision is not irrevocable, and that the result of the deliberations of the Royal Commission, which we hope will be appointed for the special purpose of examining the silver question, may be to disclose some method of relief for our finances which will, at the same time, be acceptable to Her Majesty's Government.

4. We understand the grounds on which the Lords Commissioners of Her Majesty's Treasury decline to take any steps at present towards a settlement of the silver question by international agreement to be as follows:—

Firstly, that it is doubtful whether it is possible to secure stability of value between gold and silver.

Secondly, that it is not proved that any measures which would raise the gold value of silver would on the whole be a gain to India.

Thirdly, that the arguments employed against the proposals made by the Government of India in 1878 have never been answered, and retain their full force.

Fourthly, that the difficulty can be met in great measure by reduction of expenditure.

Fifthly, that the Government of India has not distinctly stated the nature of the remedy which it proposes.

We propose to deal with these arguments in the order in which we have stated them.

Possibility of maintaining stability of relative value of Gold and Silver.

5. The Lords Commissioners remark that the question of the possibility of maintaining a fixed ratio between gold and silver is "one of the most disputable and disputed points in economic science," and they quote the declaration recorded by the representatives of Her Majesty's Government at the International Monetary Conference of 1878 that "the establishment of a fixed ratio between gold and silver is utterly impracticable."

We desire to observe that the establishment of a fixed ratio between gold and silver may be held, as in the words above used, to be utterly impracticable, either because it is theoretically impossible to devise measures which would have the desired effect, or because it is practically impossible to secure the adoption of these measures as the result of international agreement. If it is meant that it is theoretically impossible to secure stability of value between gold and silver, we cannot do more, within the limits of a despatch, than refer to the facts that the first 70 years of the present century, and to the numerous treatises in which the theoretical possibility of maintaining a fixed ratio has been demonstrated. But if, on the other hand, the Lords Commissioners refer to the practical difficulty of securing an international agreement on a sufficiently wide basis, we beg that reference be made to the proceedings of the Monetary Conference of 1881. The Conference of 1881 was held at the instance of France and the United States of America, and the following are the words of the note forwarded by the United States Minister in London to Her Majesty's Secretary of State for Foreign affairs:

"The Government of the Republic of France and the Government of the United States having exchanged views upon the subject of a conference between the Powers principally interested in the question of establishing internationally the use of gold and silver as bi-metallic money, and securing fixity of relative value between these metals, and finding themselves in accord as to the usefulness and importance of such a conference, and as to the time and place at which the same should be held, have the honour now to invite the Government of Great Britain to take part in a conference, by such delegates as each Government may appoint, to be held at Paris on Tuesday, the 19th day of April next, to consider and adopt for presentation to the Governments so represented, for their acceptance, a plan and system for the establishment by international convention of the use of silver and gold as bi-metallic money at a fixed relative value between these two metals."

France and the United States are the two nations whose influence, with the exception of that of England and India would be the most powerful in maintaining the stability of the relative value of gold and silver; and the words of the note above quoted show in unmistakeable terms that, whatever views may be elsewhere entertained, the Governments of those countries considered the establishment of a fixed ratio both practicable and expedient.

6. At the Conference the attitude of the delegates, excluding those of France and the United States, was generally one of reserve, each country desiring to retain for itself complete liberty of action; but the delegates of Holland and of Italy distinctly avowed their desire to see the free coinage of both gold and silver at a fixed ratio. M. Pierson, delegate of Holland, observed: "The adoption of "the bi-metallic system is the only means of escaping from "the annoying situation in which we are placed. That, at "least, is the conclusion we have arrived at in Holland." M. Seismit-Doda, delegate of Italy, observed: "The "Italian delegates associated themselves fully with the "declarations presented by Messrs. Denormandie and "Cernuschi, as well as Sir Louis Mallet, on the subject of "the necessity of raising the value of silver, and of establishing a fixed ratio between the two metals." The delegate of Austro-Hungary, in view of the fact that the currency of that country consisted of inconvertible paper, was unwilling to adopt an attitude other than that of reserve; but nevertheless Count Küfstein declared: "Still they felt no "hesitation in saying that as in the Conference of 1878, "so for the future, their sympathy was with any measure "which might be adopted with the aim of improving or re-"establishing as much as possible the position of silver. "They therefore hoped that the Conference would not "separate without having adopted some remedy to obviate "the inconveniences of the present monetary situation, "which they believed in many ways to be a grave one."

7. As the attitude of Germany at the Conference is of special importance, we quote at some length the words of Baron Thielmann, the delegate of that country:—"We "acknowledge, without reserve, that the rehabilitation of "silver is desirable, and that it couldb e attained by the re-"establishment of the full coinage of silver in a certain "number of the most populous States represented at this "Conference, which for this purpose would take as a basis "a fixed proportion between the value of gold and that of "silver. Nevertheless, Germany, whose monetary reform "is already so far advanced, and whose general monetary "situation does not seem to invite a change of system of "such vast importance, does not find itself able to concede, "as far as it is itself concerned, the full coinage of silver. "Its delegates cannot therefore agree to such a proposal. "The German Government is, on the other hand, entirely "disposed to help as far as possible the efforts of the other "Powers which might be willing to unite, with a view to "the rehabilitation of silver by means of a full coinage of "this metal. To attain this end, and to guarantee these "Powers against the influx of German silver which they

" seem to dread, the German Government will impose " some restrictions on itself." When Baron Thielmann was asked if the attitude of England had been the cause of the reserve shown by Germany, he replied "that the " attitude of England had had some effect on the resolu- " tion of the German Government," as it was "necessary " for the German Government to pursue a monetary system " similar to that of England." There is, therefore, reason to believe that if Her Majesty's Government had shown a stronger desire to further the objects of the Conference, Germany would have been prepared to take steps in the same direction.

8. In view of the opinions expressed by France, the United States of America, Austro-Hungary, Italy, and Holland in favour of the establishment of a fixed ratio between gold and silver, and of the undoubtedly favourable attitude of Germany, and the evident inclination of that Power to follow the lead of England, it appears to us reasonable to conclude that it was within the power of Her Majesty's Government at the Conference of 1881 to have secured the adoption of a fixed ratio; and as the evils due to the non-existence of a fixed ratio have manifested themselves in an aggravated degree since 1881, we may reasonably conclude that it is still within the power of Her Majesty's Government to secure this result, if willing to exert its influence for that purpose. Looking to the facts we have just stated, we are unable to admit the contention that the establishment of a fixed ratio is impossible because international agreement cannot be secured. It appears to us that if Her Majesty's Government abandoned the attitude of absolute reserve which they have so long maintained to the injury, as we believe, alike of England and India, there would remain no obstacle to the establishment of international agreement which could not be surmounted. Even allowing, for the sake of argument, that it should prove impossible to secure the establishment of a fixed ratio on a sufficiently wide basis to permanently maintain that ratio, we see no reason to doubt that that the active and sympathetic intervention of Her Majesty's Government would secure the adoption of measures which would tend in that direction, and which would at any rate have the effect of mitigating existing evils, and of removing grave grounds of apprehension as regards the future.

9. In connexion with the question of the possibility of maintaining a fixed ratio between the two metals, we further desire to observe that, in quoting the opinion of Mr. Goschen, Mr. Gibbs, and Sir Thomas Seccombe as recorded in 1878, the Lords Commissioners of Her Majesty's Treasury appear to have attached little weight to the extremely important fact that since the expression of opinion by the representatives of England in 1878, the evils of the unsettled state of the silver question have become greatly aggravated, that the question has been far more thoroughly discussed, and that both the origin of the disease and the nature of the remedy are better understood. It seems to us to be at least possible that if an opinion were obtained in 1886, it might differ from that given in 1878; and we know that in the case of one of the gentlemen cited, the opinion expressed in 1878 has been entirely repudiated.

10. We have no opportunity of ascertaining the views on this question which Sir Thomas Seccombe may now hold, nor are we aware whether Mr. Goschen considers the impracticability of establishing a fixed ratio as great as it appeared to be in 1878; but we observe that in 1878 Mr. Goschen concurred with the other representatives of England in holding "that a campaign undertaken against " silver would be exceedingly dangerous, even for the " countries which have given a position as legal tender only " to gold." Again, in a speech "on the condition and prospects of trade" delivered by Mr. Goschen at Manchester on 23rd June 1885, we find him reported to have expressed himself as follows:—

"Now let me take the silver question. It is impossible to embark upon that or upon the appreciation of gold in a satisfactory manner in a few sentences, because it would take a whole speech to itself. But there is one point connected with the silver question which I will touch, and it is the insecurity which it imparts to trade with the silver-using countries. That must affect your dealings with India and with others, and I am sorry to think that with regard to that insecurity there is no hope till you know what the United States will do with respect to the Bland Bill. It seems to me that we must almost conclude that the uncertainty in the trade of the silver-using countries will increase, and that the position in that respect must get worse; and I do not hold with those who think that this country has little interest in the question because we are a creditor country. This is an argument which is often put forward that we are a creditor country, and that as amounts are due to us in gold, therefore the more gold will command for commodities the better for this country. But we are not all creditors; and though we may in the balance be a creditor country, there is an enormous interest in our trade with the silver-using countries; and so I trust that this silver-question will fairly be kept in view by those who are responsible for our Indian Empire. It is a question of the deepest interest. As I have said, it is impossible for me at this moment to expatiate upon the subject; but I must submit that is a factor in the case, and a very important factor too."

Finally, we find from Hansard (3rd series, vol. cccliii, page 1491) that during the late session of Parliament, Mr. Goschen addressed the following question to the Chancellor of the Exchequer:—

"Whether in view of the deep and increasing interest shown in various parts of the country on the silver question, he will consider the expediency of separating this urgent subject from the other matters referred to the Royal Commission on the Depression of Trade, and of appointing a separate Commission to inquire into the position of silver, the condition of the currency, and the various plans of utilising silver to a greater extent for currency purposes."

We believe, in view of the above extracts, that we are justified in coming to the conclusion that, whether or no Mr. Goschen believes in the practicability of establishing a fixed ratio between gold and silver, he at any rate considers the silver question to be one of great importance, and is anxious that measures should be taken to utilise silver to a greater extent for purposes of currency.

Mr. Gibbs has entirely altered his opinion since 1878: is now of opinion that the establishment of a fixed ratio is not merely practicable, but in itself highly desirable; and for some considerable period has himself been President of the Bi-metallic League. We are at a loss to understand how the change in Mr. Gibbs' views since 1878, which his writings on the subject have rendered matter of much notoriety, should, as would seem to be the case, have escaped the knowledge of the Lords Commissioners of Her Majesty's Treasury.

Question of gain or loss to India from the fall in the rate of exchange.

11. With regard to the question whether India has obtained any such advantages from the fall in exchange as wholly or in any part to compensate her for the undoubted injury which the fall inflicts, and specially for the loss on the gold remittances of the Government of India, we would observe that this is a matter on which opinion is by no means unanimous. The fall in the rate of exchange has coincided in point of time with a large development of Indian trade and a steady increase of Indian revenue; but many authorities hold that this growth of trade and revenue is due to a succession of several good harvests, to the increased energy shown of late years in the construction of railways in India, to the cheapening of the cost of sea transport, and to the opening of the Suez Canal rather than to the fall in exchange. The question has been recently examined in a paper entitled "Indian Trade and Exchange," prepared by the Assistant Secretary in our Financial Department, copies of which have been forwarded for your Lordship's information; and the considerations therein set forth materially assist in enabling a judgment to be formed upon this important matter. It is beyond question that the instability in the relative value of gold and silver discourages the investment of capital in India; and the higher rate of interest which we should have to pay for silver loans forces us to borrow in gold, and to accept the risk of a still further appreciation of that metal. The variations in exchange introduce great uncertainty in that large class of commercial transactions in which the element of time is involved. The fall in silver, by throwing unexpectedly a heavy burden on our finances, has more than once compelled us to defer the construction of public works intended for the protection of the country against famine, and has led to regrettable and wasteful fluctuations in our public works policy. These are evils of great magnitude; and if we take into consideration also the direct accumulating increase to the public expenditure due to the fall in exchange, it is, to say the least, difficult to contend that India as a whole may have gained as much as she has lost. It has no doubt been argued that the fall in exchange by encouraging Indian exports has given a stimulus to industries in which India competes with countries that have a gold standard; but, apart from the results of recent inquiry into this part of the subject which we have above alluded to, we have been unable to discover that the silver prices of Indian exports, or Indian commodities generally, have risen since the fall in the rate of exchange, and there are good grounds for believing that the effect of the change that of late years

has taken place in the relative value of silver and gold has been to lower gold prices and not to raise silver prices. Apart from this aspect of the question, it further appears to us that the Lords Commissioners of Her Majesty's Treasury have failed to notice that those persons who are of opinion that India has gained by the fall in exchange hold, as an essential part of the same opinion that England and all other countries with a gold standard have lost in an exactly equal degree. They argue that the rupture of the old ratio of 1 to 15½ between the two metals has led to a reduced supply of metallic money to countries with a gold standard, and an increased supply, of an exactly equivalent amount, to countries with a silver standard; and if the increased supply has been a gain to the silver countries, it follows that the reduced supply must have proved injurious to countries with a gold standard by causing a general fall in the prices of commodities.

12. The Lords Commissioners quote, with seeming approval, the opinion of Mr. Barbour, our Financial Secretary, on the question of the gain or loss to India; but we observe that they have omitted to refer to the passages in which Mr. Barbour states that the gain of the silver countries is balanced by a corresponding degree of loss on the part of the gold countries. The following extracts from the preface to the book quoted from show what Mr. Barbour's opinion is on this point:—

"This fall in prices has been aggravated in countries using the gold standard, and checked, or altogether obviated, in countries using the silver standard, by the partial demonetisation of silver. In so far as this has been the case, the silver countries have unquestionably gained, while the gold countries have lost." * * * * * *

"Every fall in the gold price of silver will be followed by a corresponding decline in the gold prices of commodities, by increased disinclination of capitalists in London to invest money in India, by a reduction of profits and a general increase of the burden of obligation already contracted in England."

These passages make it clear that the theory of gain to India by the fall in exchange is based on the belief that countries with a gold standard have lost in an equal degree; and that, in short, the gain of the silver countries arises from a species of protection against countries with a gold standard. It is not possible to accept one-half of the theory and to reject the other. If the silver countries have gained by an increase of the supply of metallic money, the gold gold countries must have lost by an exactly equivalent reduction in the supply. We desire to lay special stress on this aspect of the case, because we find it stated that "England would not herself take the initiative in making "changes which would have the effect of disturbing a "monetary system under which she has enjoyed much "prosperity," and no notice is taken of the fact that any special gain to India from the low exchange must have been attended with corresponding loss to England. In connection with the question of the prosperity which England may have enjoyed in former years under the gold standard, it should not be overlooked that up to 1873 England enjoyed the benefits of a comparatively stable ratio between her gold standard and the silver standard of other countries, and that since the wide departure from the old ratio occurred, the progress and prosperity of England have suffered a decided check. Without attempting to define the specific causes which have been in operation, we may observe that the prices of commodities have fallen very largely in England in recent years.

13. Even if, for the sake of argument, it be admitted that India, as a whole, has gained as much as she has lost by the fall in exchange, we are still of opinion that a change is imperatively required in the interests of the British Government in India. If the gain has just balanced the loss owing to the fall in exchange, we may reasonably conclude that in case of a rise in exchange, the loss would not on the whole exceed the gain, while the financial relief, and consequent political advantage, to our Government would be incalculable. This view of the matter was referred to by Sir Louis Mallet at the Conference of 1881 in the following words:—

"Although we may, no doubt, look forward in the future to some rearrangement of taxation when the depreciation of the coinage has produced its effect in a general rise of prices, and particularly in that of labour, we must wait a long time for that result; and, meanwhile, it would be impossible without serious political danger to propose new taxes based on considerations which the mass of the people would not be able to understand.

"But it is not only the actual loss which we have to think about; it is the absolute uncertainty which hangs about the future, and which prevents any serious or accurate calculation of the revenue and resources of Government."

These words have a special bearing on our present financial position. The recent renewal of instability, followed by a heavy fall in exchange, and maintained up to the present time, has rendered the most careful calculations we can make valueless. We have already imposed unpopular taxation, and we see before us the possibility of being compelled to have recourse to the imposition of further taxes, alike unpopular and injurious to the well-being of the community. The future is, if possible, even less assured than it was when Sir Louis Mallet spoke. Moreover, the rise in prices, owing to the depreciation of the silver currency, to which Sir Louis Mallet looked forward, has not taken place; the alteration in relative gold and silver prices, which must necessarily follow the alteration of the exchange, has taken the form of a fall in gold, and not of a rise in silver prices. We cannot, therefore, count, within any reasonable time, on such a growth of revenue as will enable us to meet the burden thrown on our finances in recent years by the fall in exchange.

14. Putting aside, however, all matters of minor importance, we desire to observe that, in our judgment, the question of the establishment of a stable ratio between gold and silver must be decided on broader grounds than the gain or loss of a single country, and that it is a question of world-wide importance, the interest of England in securing a permanent settlement being no less than that in India. So far as regards the momentary standard, no country is, or can be, independent of the action of other countries. Apart from the dislocation of trade and industry caused by variations in the rate of exchange between two standards not linked by a legal ratio, each country is at the mercy of others, which, by adopting or discarding the gold or silver standard, can seriously prejudice the interests of that country which makes no change in the standard. England has made no change in the standard since 1816; but the result of the more extended use of gold by foreign countries is certainly not less serious in its effect on the industries of England and the interests of the English people than in its effect on French and American industries and interests. The Government of India, like that of England, has made no change in the standard; yet the action of foreign nations has placed our finances in those perpetually recurring difficulties which are set forth in our Despatch of 2nd February last, and threatens them with even greater disasters in the immediate future. The question of the monetary standard appears, therefore, to us to be pre-eminently one for settlement by international agreement; in no other way can a satisfactory or permanent settlement be effected; and we trust that Her Majesty's Government will abandon their attitude of absolute isolation—an attitude which, we venture to think, is both indefensible in theory, and in practice fraught with danger both to England and to India.

Omission to answer the arguments employed against the proposals of 1878.

15. In 1878 the Government of Lord Lytton proposed that the coinage of rupees should be restricted, by means of a seigniorage, in such manner as to raise the value of the rupee from 1*s.* 7*d.*, the market rate of the day, to 2*s.*; and these proposals contemplated ultimately the introduction into India of a gold standard. The Lord Commissioners of Her Majesty's Treasury refer to this proposal, and express regret that in the Despatch of 2nd February last the Government of India has not replied to the arguments which led to its rejection, nor shown that it has now some scheme in view which is not open to similar objections. Great importance is evidently attached to this point, as in Mr. Fowler's letter of 31st of May the arguments used against the proposals of 1878 are repeated, and it is added that "the Lords Commissioners find no reason stated in "the Despatch of the Government of India in the present "year which induces them to dissent from the conclusions "thus set forth on the authority of Sir Stafford Northcote "as to the results of any attempt to artificially enhance "the gold price of silver." We confess to having read these remarks with surprise, as, for the reasons which follow, we can perceive no analogy whatever between the proposals of 1878 and those which we recently put forward.

16. The proposals made by the Government of India in 1878 involved the restriction of the coinage of rupees, a measure which, in our recent proposals, we have not advocated. The proposals of 1878 aimed at establishing a fixed ratio between gold and the coined rupee, which is a totally different matter from the establishment of a fixed ratio between gold and silver. The Government of 1878 proposed to establish between gold and the rupee the ratio of ten rupees equal to one pound sterling, while the proposal contained in our Despatch of 2nd February last merely

involved the establishment of a stable ratio between gold and silver, and left the question of what that ratio should be for future discussion. The proposals of 1878 could have been carried out by legislation in India, and were entirely independent of international agreement; the essential feature of our present proposals is their dependence on international agreement. The proposals of 1878 would not, as seems to be supposed, have raised the gold value of silver, but would, on the contrary, have tended very materially to reduce it. The arguments used against the measures advocated in 1878 have, therefore, no bearing on our recent proposals; and, as those measures lay outside the scope of the recommendations contained in our Despatch of February 2nd, we admit our inability to perceive why, in that Despatch, we should have been at the pain of answering them. The proposals contained in our Despatch of 2nd February did not necessarily involve the raising of the gold value of silver to the old ratio of 15½ to 1. It was our intention that the question of the precise ratio to be adopted should be left for future discussion, and for settlement after full consideration of all the interests involved, and after ascertainment of the view of the principal nations interested in the matter. Even if a Conference should have decided on the adoption of the old ratio of 15½ to 1, we cannot admit that the change could more accurately be described as one for raising the value of silver rather than as one for lowering the value of gold. The essential end to which our recent proposals were directed was the establishment of a stable ratio between silver and gold; and even if a higher ratio than the market ratio of the day had been adopted, the procedure which we advocate would have had as much effect in lowering gold as in raising silver. The scheme of 1878, on the other hand, would have materially lowered the value of silver, and must ultimately have had the effect of raising the value of gold by increasing the demand for it. We fail, as we have said, to perceive anything in common between the two proposals; and we conceive it unnecessary to remark further on this portion of the question.

Possibility of relieving the finances by reduction of expenditure.

17. In paragraph 15 of Mr. Fowler's letter our attention is directed to the importance of the reduction of expenditure, and it is added that the principal element which has determined the unfavourable condition of Indian finance, and which has conduced to our difficulties more obviously and certainly than the fall in the price of silver, is the alarming growth of expenditure. The general question of the growth of expenditure on the civil administration of India was dealt with very fully in the Despatch from Lord Ripon's Government, No. 233, dated 24th August 1883, and in the Minute by Sir Evelyn Baring, which accompanied, as well as in other correspondence which took place about the same time, and which was published as a Parliamentary blue book in August 1885. We can add nothing to what is contained in the correspondence in question beyond remarking that our financial difficulties since that date have forced us to scrutinise very narrowly all proposals for incurring additional expenditure, and that we have been compelled to put aside many valuable reforms simply because we could not find the means to carry them out. We do not know to what facts the Lords Commissioners of Her Majesty's Treasury more particularly desire to draw attention when they speak of the alarming growth of expenditure. The fall in silver has no doubt added largely to expenditure on account of exchange, and we have been obliged to incur expenditure in the construction of famine railways, which do not, for the present at any rate, return a profit sufficient to cover interest on capital. The same remarks hold good in regard to the expenditure on frontier railways and coast defences, while the events that have occurred in recent years beyond the north-west frontier have compelled us to increase the army, both European and native. Her Majesty's Government, we believe, concur with the Government of India in the necessity of measures calculated to minimise the risk of such loss of life as occurred in the Madras famine, and to guard against external attack on the north-west frontier of India. So long as the adequate protection of India against the consequences of war, and famine is an essential portion of the policy of Her Majesty's Government, it is premature to object to the expenditure which the attainment of these ends necessarily for a limited time involves.

18. With the exception of the expenditure referred to in the preceding paragraph, which was incurred deliberately and with a full knowledge of the burden it would impose on the country, and which we should gladly have avoided if we could safely have done so, we are not aware of any great growth of expenditure in recent years. The measures taken in 1881 to provide an insurance against the financial effects of famine have, no doubt, added nominally 1,500,000*l.* (conventional sterling) to the expenditure; but this was, as those conversant with Indian finance are aware, a measure of economy, and this item of 1,500,000*l.* is of the nature of a reserve or insurance fund. Possibly the fact may have been overlooked that the Government of India is now a very large railway proprietor, and that the opening of new railways necessarily involves an addition to the yearly expenditure of the total amount of the working expenses of the railways. This expenditure cannot, however, be avoided; it brings in corresponding revenue, and can in no sense be treated as an addition to the cost of Government properly so-called. The danger of misunderstanding arising from this cause was alluded to in our Despatch No. 331, dated 1st December 1885, in the following terms: "The "rapid increase and great complexity of the railway trans- "actions make it very inconvenient to embody them in "finance accounts, and the apparent increase of revenue "at the disposal of Government as new lines are opened and "corresponding apparent increase of cost of governing the "country give rise to mistaken idea of the increasing income "and extravagance of the Government." But whatever the origin of the remarks regarding the growth of expenditure may be, we must be allowed, with all deference, to maintain that we have by no means been forgetful of the relief to the finances which can be obtained by reduction of expenditure; the fall in the gold value of silver has more than once led to reductions of expenditure, which have caused serious administrative inconvenience; and we are at the present time engaged in making every reduction which is reasonably or safely practicable, though there is no hope that any economies we may be able to effect will do more than cover a fraction of the additional burden imposed on India by the recent fall in exchange.

19. In order that there may be no room for misunderstanding as to the serious effect which the fall in exchange has had on the course of Indian administration, and of the repeated efforts which have been made to meet the additional expenditure therein involved by reduction of expenditure, we will briefly review the facts of the last 10 years. In the financial statement for 1876–77 Sir William Muir remarked as follows:—

"The sudden depreciation of silver, and the consequent "enhancement of charge to the Government of India in "laying down yearly the sum required in England of about "fifteen millions sterling, without doubt cast a grave "shadow on the future. In truth, it may be said that the "danger, from whatever point of view considered, is the "gravest which has yet threatened the finances of India. "War, famine, and drought have often inflicted losses on "the exchequer far greater than the charge which threatens "us in the present year. But such calamities pass away: "the loss is known and limited; and when it has been "provided for, the finances again stand on sure and stable "ground. This is not the case with the present cause of "anxiety. Its immediate effects are serious enough, as "has already been shown. But that which adds signifi- "cance to it is, that the end cannot be seen; the future is "involved in uncertainty." As a consequence of the position in which the Government found itself owing to the fall in exchange, measures were taken in July 1876 for th effective curtailment of expenditure on extraordinary public works, and at the same time all outlay of public money on the ordinary civil administration was stopped "which is "not absolutely necessary, or to which the Government is "not committed, or the discontinuance of which will not "cost disproportionate loss and waste."

20. In November 1878 measures were again taken "for "the reduction of the ordinary expenditure of the country "within the narrowest limits"; but these measures were based on the probability of heavy war expenditure, as well as on the fall in exchange. The orders given in November 1878 were followed up in May 1879 with equally stringent orders for still further reduction of expenditure in all branches of the administration. The contracts with provincial Governments were temporarily set aside, and contributions obtained from them to help to tide the Government of India over its immediate difficulties. The result of the measures taken involved a reduction of 758,000*l.* in ordinary expenditure, as well as the reduction of productive public works expenditure by 1,000,000*l.* yearly, although the estimated expenditure of 1879–80 was already 1,000,000*l.* below the average expenditure of the two preceding years.

In June of the same year the following language was used:—"Rigid economy in every branch of the public "service is in present circumstances the policy which must

" be followed." To quote again the words of the resolution of the 1st May :—

" Unless positive necessity exists, no improvements in administration, however desirable, must be undertaken if they involve increased charges; no fresh establishments must be entertained; no new offices must be created; no new works, which it is possible to postpone, must be commenced.

" It is through this policy of retrenchment and economy that the necessity for fresh taxation has for the present been avoided; and if the fall in the value of silver in relation to gold should further increase, strict adherence to that policy will be more than ever essential."

The language used by Lord Lytton's Government in their Despatch No. 138, dated 22nd May 1879, shows how great must have been the pressure which compelled them to have recourse to such reductions :—

" We do not propose in this Despatch to discuss the circumstances which have rendered it necessary to undertake these reductions in the expenditure on public works in India. The result will undoubtedly be that the material progress of the country will be seriously retarded; and we in no way disguise from ourselves the injury which India will sustain, or the discredit which will be entailed on the Government, by even the temporary abandonment of a policy which we are satisfied is essentially wise, and which in spite of many errors has been on the whole attended with eminent success. The measures which we now take with so much regret have been forced upon us by circumstances over which we have no control, and for which our Government is in no degree responsible."

21. From 1879–80 the rate of exchange remained nearly constant for some years, the average rate obtained for home remittances having been as follows :—

	d.
1879–80 - - - - -	19·96
1870–81 - - - - -	19·96
1881–82 - - - - -	19·89

The surplus revenue, which was found to exist in the beginning of 1882–83, was used, not for the increase of expenditure, but for the reduction of taxation, including the removal of the general import duties.

After 1881–82 the course of exchange was steadily downwards, and in 1883 the question of reduction of expenditure having been brought before, and impressed upon, the Government of India by the Secretary of State for India in Council, the matter was exhaustively considered, as will be seen from the correspondence referred to in paragraph 17 of this Despatch.

In 1885 stringent measures were taken for the reduction of expenditure in consequence of the probability of a war with Russia; and, in order to meet the cost of military preparations, reductions were effected in the sanctioned expenditure of 1885–86 to the extent of over 1,500,000*l.* (conventional sterling). As regards the current year, we may observe that at the time of framing the estimates our financial difficulties were seen to be so great that every effort was made to keep down expenditure, and the extreme measure was adopted of withdrawing the sum of 400,000*l.* from Local Governments, and consequently of reducing the possible provincial expenditure by that amount. In February 1886 a Committee was appointed with the special object of effecting reductions of expenditure, and is at present earnestly prosecuting inquiries directed to this end. The language used in the orders appointing the Committee indicate the anxiety with which we have sought economy in the hope of avoiding taxation.

"The circumstances in which the Government now finds itself placed compel it to examine with renewed and anxious attention the possibilities of such an effective decrease in its expenditure as shall in a sensible degree contribute to relieve it of the financial embarrassments with which it is threatened. The uncertainty which prevails regarding the future relative value of gold and silver compels the Government to contract, so far as is possible, expenditure which in other circumstances may have been desirable or necessary, but which at present it can no longer maintain."

22. The sketch which has been given of the financial history of the last ten years is sufficient to show that the Government of India has been very far from unmindful of the relief to the finances which may be obtained by economy and reduction of expenditure; it demonstrates, on the contrary, that such relief has frequently been secured at the cost of great detriment to the administration. We are at present again seeking to effect all possible economies in the cost of civil administration, and we hope in this way to secure an improvement to the extent of at least 500,000*l.* yearly. How insufficient this relief may prove in comparison with the burden thrown on the finances by the fall in exchange will be seen from the fact that, though the rate of exchange for the estimates of 1886–87 was taken at only 1*s.* 6*d.* per rupee, we have at present to contemplate the possibility of taking a rate as low as 1*s.* 4*d.* per rupee in the estimates of 1887–88—a fall which would impose an additional yearly burden on our revenues of more than 2,000,000*l.* (conventional sterling).

Looking to the facts which we have stated, we are compelled to arrive at the conclusion which admits, in truth, of little dispute, that further reduction of expenditure is unlikely to give us financial relief in any degree commensurate with the magnitude of our difficulties; and that the contention that the alarming growth of expenditure in late years is the principal element in the unfavourable condition of Indian finances will not stand the test of examination.

Nature of the remedy proposed.

23. With regard to the complaint that we have not definitely indicated the nature of the international agreement which should supply the solution of the silver question, we desire to observe that it appeared to us that we stated with sufficient plainness that the end to be aimed at was a stable ratio between gold and silver, and that the means for the attainment of this end was an international agreement between the countries interested in the question. We did not specify the exact ratio which we wished to see established, nor the precise nature of the agreement, because we felt that on both these points it would be necessary to ascertain and take into account the views of foreign Powers, and that any attempt on our part to lay down the exact terms of the settlement at the outset might have a prejudicial effect on the negotiations. If Her Majesty's Government had been willing, under any circumstances, to recommend the opening of negotiations, there would have been no difficulty in obtaining a more definite expression of our views by telegram. Your Lordship will, moreover, not have forgotten that on May 29th of the present year, while we were still awaiting the reply of the Lords of the Treasury, we submitted specific proposals, which were only not laid before the Lords of the Treasury because their letter was received by your Lordship's predecessor very shortly after the recommendations we refer to reached him. What we consider essential in the interests of the finances of British India is the establishment of stability in the relative value of gold and silver, and the removal of the danger which hangs over the silver market from the existence of large quantities of overvalued silver money in the currencies of France, the United States, and other countries. For the attainment of these ends, we propose generally the utilisation of silver as currency to a greater extent than is the case at present, as well as an international agreement for the free coinage of silver, and the making of both gold and silver coin a legal tender at a fixed ratio by a group of nations possessed of a metallic currency of sufficient extent to maintain that ratio permanently. The question of the ratio to be established is one which must be decided by the nations which undertake to coin both gold and silver freely, and it should be a ratio not lower than the average market ratio of recent years, and not higher than the former French ratio of 1 to $15\frac{1}{2}$. So great is the importance which we attach to stability of relative value, that we do not consider that there would be sufficient grounds for objecting in the interests of India to any ratio, within the limits above indicated, which might be approved by the other nations concerned; and, on behalf of India, we would be willing to undertake either to maintain the present silver standard, or to coin both silver and gold for all comers at the fixed ratio. It does not appear that any plainer expression of our views, or any proposals of a more specific nature, could be expected, or should be required, at the present stage.

24. In conclusion, we desire again to express our conviction of the importance, in the interests of British rule in India, of securing a speedy and final settlement of the silver question. In our Despatch of 2nd February last we stated in the clearest terms, but not, as we consider, more strongly than the occasion required, the nature and extent of the difficulties and dangers to which India is exposed in the present state of the silver question, and we need not repeat our observations. The immediate cause of future disturbance which we specially took into consideration at that time was the possibility of the repeal of the Bland Act by America. Since the date of our Despatch, although there is every prospect that America will, for the present at least, continue the coinage of silver, the rate of exchange has

fallen 1¾*d.* per rupee. The additional burden thrown on our finances by this fall of 1¾*d.* in the gold value of the rupee, after all allowance made for any possible set-off, amounts to at least 1,750,000*l.* (conventional sterling) yearly, and it is quite possible that the repeal of the Bland Act by America might increase the burden by an equal amount. We cannot hope to cover more than a fraction of the amount already added to our expenditure through the recent fall in silver by any economies in the cost of the administration which we may be able to effect. Even though the measures which we are now carrying out for the defence of the country against war and famine should, in view of our pressing financial difficulties, be curtailed, further taxation appears at present to be inevitable; and when we have again established equilibrium, there is no prospect that the settlement will be final, or even reasonably permanent. A rise in the rate of exchange may prove that unpopular measures of taxation have been undertaken unnecessarily; a fall may force us to impose further taxation. Meanwhile the pressure of our present difficulties is compelling us to use resources which we relied upon as a reserve to meet the cost of possible war or famine. Above all, our finances will still remain subject to the special uncertainty due to the unsettled condition of the American currency. Your Lordship is aware that a powerful party in the United States of America presses for the stoppage of the coinage of silver. If that course should be adopted in the immediate future our financial difficulties threaten to be greater than any which the Government of India has hitherto experienced. We do not therefore hesitate emphatically to repeat that, from the point of view of Indian finance, the position has become intolerable.

We have, &c.

(Signed) DUFFERIN.
F. S. ROBERTS.
C. P. ILBERT.
S. C. BAYLEY
T. C. HOPE.
A. COLVIN,
G. CHESNEY.

ANALYSIS OF EVIDENCE.

(Names of Witnesses arranged in Alphabetical Order.)

PROFESSOR ROBERTS AUSTEN, F.R.S.:

Is chemist to the Royal Mint, 1198.

Puts in a paper on the subject of the cost of producing silver, 1200, 1201.

Different methods of obtaining silver, 1202–1204; by the refining of native gold, 1205–1211; by the desilverisation of lead, 1212–1233; by the desilverisation of copper, 1234–1247; from silver ore, 1248–1274.

General conclusion as to mean cost of production by the above methods, 1275–80, 1326.

Explains what is included in cost of production, 1281–1300.

Notices large difference between cost of production and the market price of the commodity, 1301-1316.

Observations on amount of production of silver, 1323–1325, 1332, 1333.

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